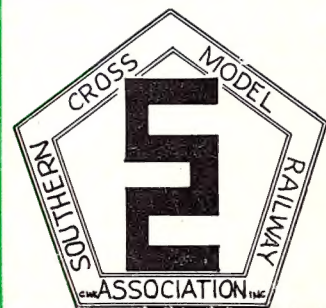


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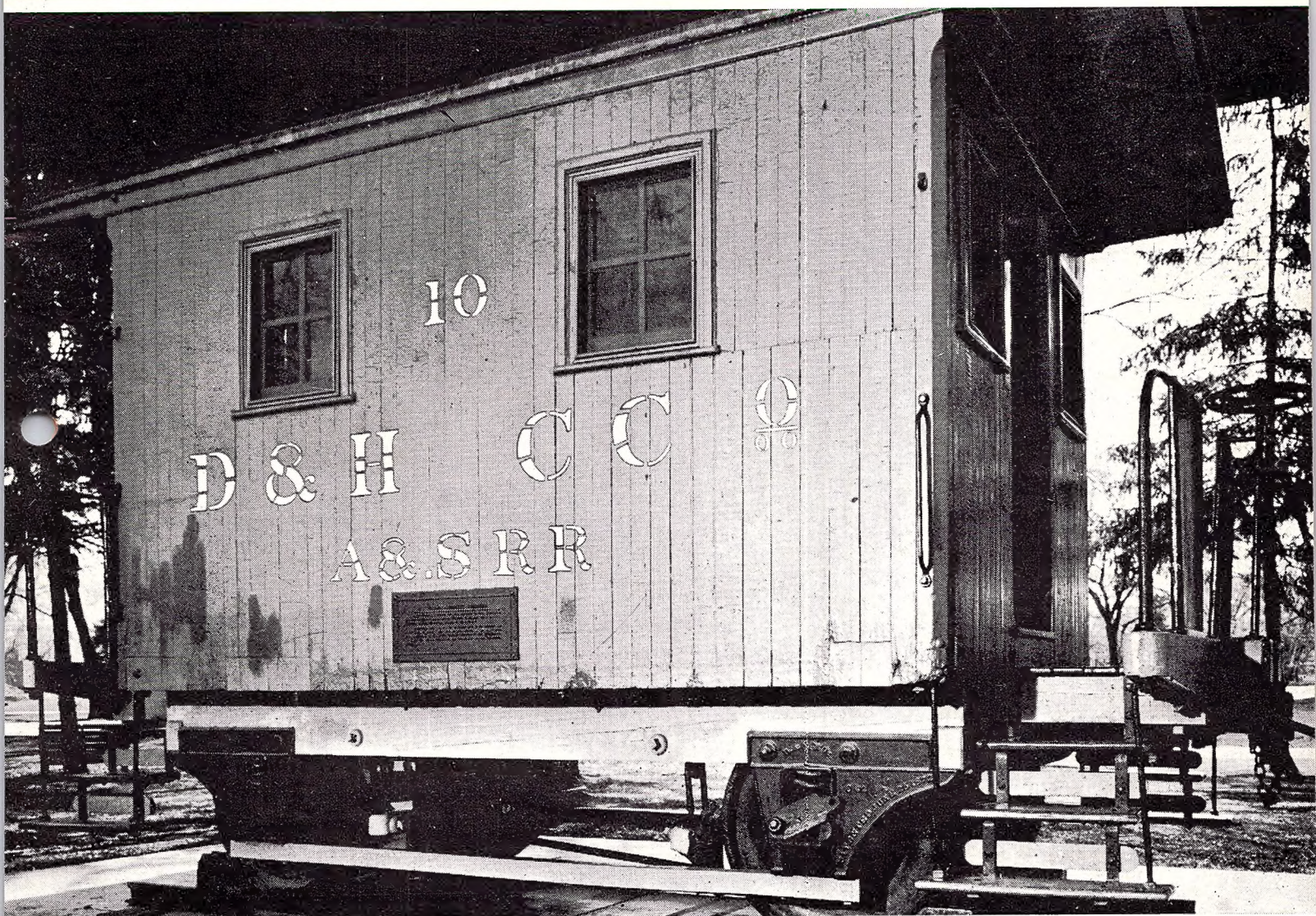
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Vol. 3, No. 26

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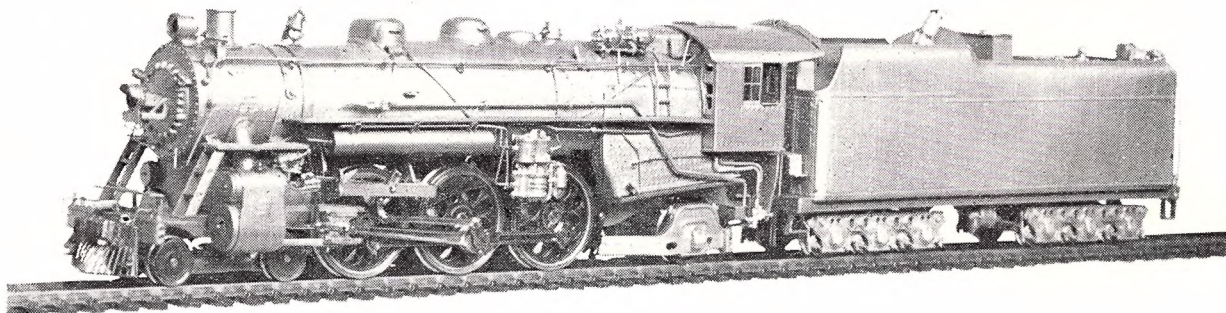


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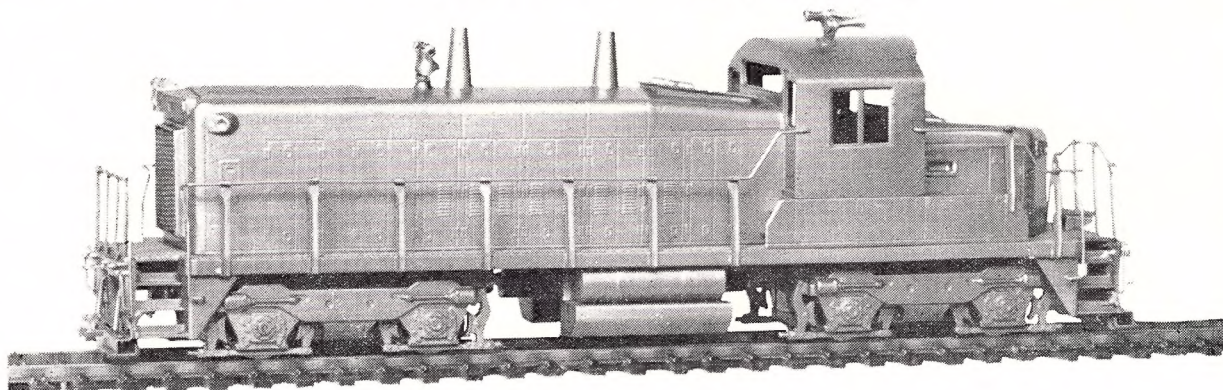
NEW!

— HO C.&N.W. 4-6-2 PACIFIC ... BY 'UNITED' ...



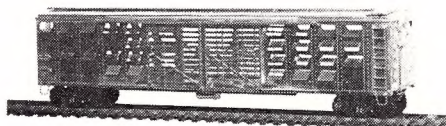
C. & N.W. 4-6-2 PACIFIC: Among the most famous of the crack passenger trains in the U.S. was the C. & N.W.'s "Twin Cities 400". Inaugurated January 2, 1935, "The 400" ran between Chicago and Minneapolis-St. Paul, a distance of a little over 400 miles, in as many minutes. Average speed, excluding stops, was 60.5 M.P.H. From the beginning and for 28 years thereafter, the "400" was headed up by one or another of the road's 2900 series Class E-2 and E-2A which Maintained the record schedules set by No. 2907 in '35. Capable of speeds in excess of 100 m.p.h., the Class E-2's were not wholly displaced by diesels until 1963... United has modelled the Class E-2 as seen in her last conversion and has truly caught the flavor and the power of a fabulous creation amongst steam locomotives. Pittman DC-70 motor. Unpainted, honed finish. Ready-to-run. Length: 12". Weight: 28 oz. Price: \$66.60.

— HO 'RS-1325' DIESEL ... BY KUMATA ...

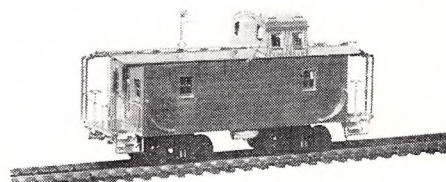


'RS-1325' DIESEL: Built by EMD in 1960 to satisfy the need for a small switcher that could also be used in road service, the low nosed 'RS-1325' is the ideal modern loco. for that small branch line or switching service. Powered on all wheels. Enclosed, axle hung worm gear boxes, connected by universal couplings and driven through double reduction gears from a 5 pole motor. All running plate chequer surfaced. Lost wax castings. Double etched hood, finished with fine mesh radiator screen. Ample room for extra ballast. Unpainted, honed finish. Ready-to-run. Length: 7". Weight: 11 oz. Price: \$45.00.

The slender, sharp fidelity of Kumata's HO brass rolling stock has already won wide acclaim. Now, two further outstanding items are added—



50 ft. Steel Cattle Car (less Trucks) \$11.90

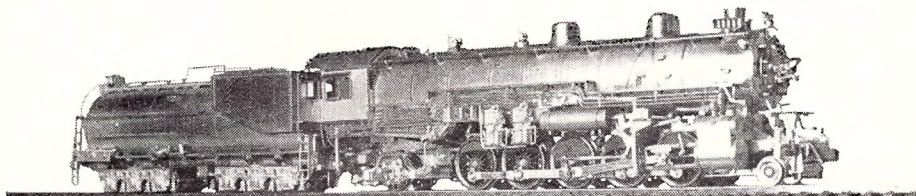


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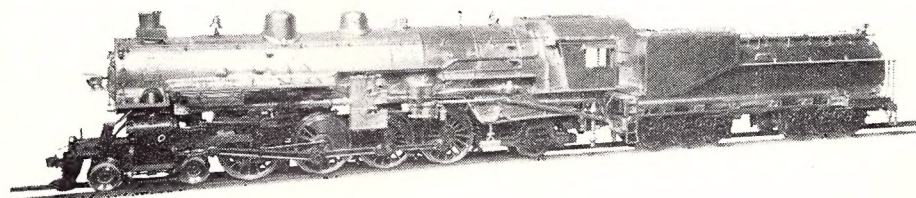
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FROM THE 'SHOPS OF KATSUMI... S.P. MOTIVE POWER FOR MAINLINE SERVICE!...

HO 'F-5' CLASS 2-10-2: Built to the order of Balboa Scale Models and dressed with investment castings supplied from the U.S.A., this massive Locomotive comes with Vanderbilt tender, sprung main-frame and "double header design" insulated front coupler. Unpainted, ready-to-run. Length: 13½". Weight: 2 lb. Price: \$104.50

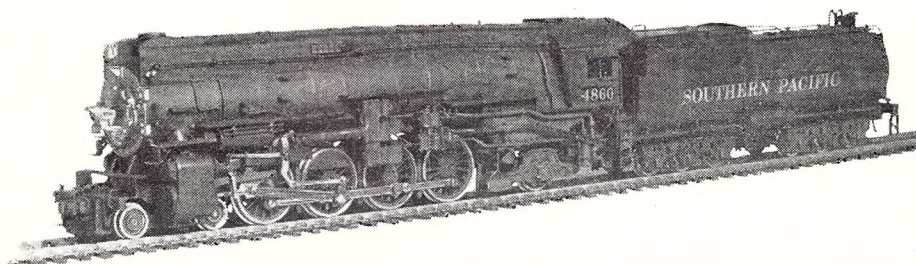


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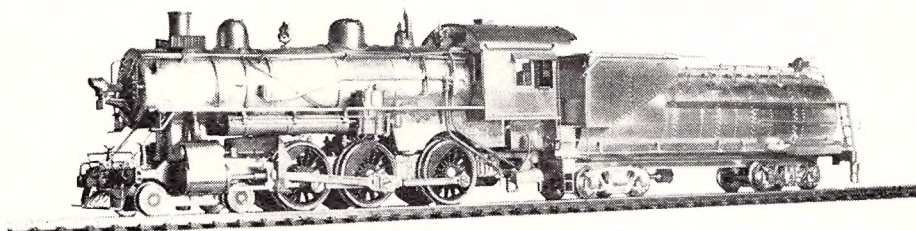


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O GAUGE MODEL COMING!
(view shows painted, lettered and weathered HO model owned by Mr. G. Parry, of Melbourne).



HO 'T-28' CLASS 4-6-0: For those requiring economic, medium traffic motive power, this Locomotive, manufactured to the order of Westside Model Co., will provide the answer. Rigid frame. Long Vanderbilt tender. Unpainted, ready-to-run. Length: 10½". Weight: 17 oz. Price: \$57.00



Other News from "THE DOCKYARD" ...

'United' have recently delivered the new HO C.&N.W. Pacific at \$66.60, along with more 3-truck Shays, S.F. 2-8-0 and 4-8-4's...

Of all impressive interurban electric locomotives, the 'daddy' of them all was undoubtedly the I.T.S. Class "C", a double articulated, 4-truck Locomotive. Again

available in HO after an absence of approximately five years, the new stocks feature every external detail of the prototype and are powered on all 16 wheels! Price: \$39.00. Also to hand in HO 'traction' are the new S.N. 126 series 5 Window Niles Combine at \$32.50 and the S.N. 220 series Niles 57' Trailer Coach at \$25.90...

In HO diesel-electric power, Kumata are to follow the fine, new 'TR-6' and 'RS-1325' models with the E.M.D. 'E-9' A and B units, as well as the giant G.E. U-50. All three to come dual motored... Full stocks of all 'EGGER-BAHN'

(Cont. on page 18)

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THE AUSTRALASIAN MODEL RAILROAD MAGAZINE

Vol. 3, No. 26, MAY/JUNE, 1967

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THE OFFICIAL JOURNAL OF NMRA IN AUSTRALASIA
Incorporating THE YARDMASTER, The Bulletin of the Sydney Model
Railway Society.

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NEXT ISSUE CLOSING:

15th JUNE

On the Cover...

Reproduced here is the ori-
ginal Caboose which is the
subject of the Contest describ-
ed on page 16.

HINTS ON MODELLING FOR PUBLIC EXHIBITION

by NORMAN CAVE

PART TWO

Following on from the previous article, the bogie sides are formed in sheet brass .004" thick by pressing and are soldered to the side frames. The bogie sides are thus decorative only. They serve no function in the operation of the bogie. Die cast metal or plastic sides can be used equally well provided the axle holes are made large enough to clear the axle and so not interfere with the function of the bogie.

The wheels used have pointed axle ends and the bogie sides are arranged so that the side thrust is taken on the axle ends rather than on the wheel hubs. This reduces the friction a little but is not greatly beneficial.

The vehicles so fitted are tested for some hours on track which contains all the normal track faults in exaggerated form, changes in level at rail joints on curves, reverse curves with dog-legged joints, facing points on a curve, twisted track.

A minimum of five hours testing ensures that each vehicle is subjected to each fault 1000 times.

The only fault these bogies will not comfortably negotiate is tight gauge which is fatal for any stock and should never be allowed to occur.

When the first trains were built we had the choice of two types of wheel sets, one 'Nucro' type, had brass wheels on steel axles, the other 'Peco' type, a moulded plastic one piece assembly.

The former was chosen as being likely to prove satisfactory but fortunately the plastic wheels were also tried. From experience gained it was soon apparent that the 'Peco' wheel sets were satisfactory in performance and had several advantages over the 'Nucro'.

The brass wheels of the 'Nucro' sets wore to thin flanges and hollow treads after about 300 hours running; the 'Peco' wheels do not show any wear.

The steel axles of the 'Nucro' sets require lubrication for best results, the plastic axles of the 'Peco' do not. This is important as it can take an hour to lubricate a train such as the Overland, once daily for five trains becomes a chore which is worth avoiding.

The plastic wheels run a little more freely than the brass especially if advantage is taken at the pointed axle ends.

Build-up of dirt on the treads has never been a problem. There appears to be no difference between brass and plastic wheels.

The driving wheels of motive power have similarly received detailed attention to determine the best material. Brass, nickel plated brass, steel and cast iron have been used.

Brass wears rapidly, as found on the

hailed stock, and also is prone to burning if current is picked up through the wheels. Nickel plating is harder but also burns.

Steel has not been used as extensively as cast iron but appears to behave in the same way and both materials are recommended.

Cast iron and mild steel are both equally resistant to wear and are excellent for current collection.

The system is two-rail and current collection on bogie motive power has been by three methods—

- (i) Collection on one side of power bogie and the other side of non-power bogie, through wheels, axles, bogie frame and body.
- (ii) Collection on both sides of non-power bogie with insulated tyres and phosphor bronze brushes on inside of tyres.
- (iii) Collection on both sides of power bogie with insulated tyres and phosphor bronze springs on inside or outside tyres.

There is no doubt that (iii) is the best method.

Method (i) has the advantage of simplicity but a significant and variable resistance is introduced in the current path at axle bearings and bogie centres. Severe spark fretting took place at the bogie centres and caused repeated failures until the motor lead was soldered directly to the bogie frame. It is suspected that this fretting occurred also in the joints of the equalised bogies and accelerated the wear in axle bearings.

Method (ii) eliminates the points where electrical resistance can occur and is reasonably satisfactory. However, the non-power bogie wheels tend to have dirtier treads than on the power bogie due probably to slipping of the powered wheels on the rails giving a self cleaning effect.

Method (iii) as well as providing the best possible method of current collection through the wheels, has been found to have the advantage of increased adhesion.

A locomotive with current collection through cast iron driving wheels will haul almost twice the load of the same locomotive with collection through the non-driving wheels. The ratio is actually 5 to 3, which means that if the locomotive will haul three cars with collection through the non-driving wheels, it will haul five when collection is through the driving wheels.

It should be noted that this effect is not immediately apparent, approximately $\frac{1}{2}$ hour of continuous running being required to condition the wheel treads.

It has been found that operation and

appearance is greatly improved by taking care that the wheels, particularly locomotive driving wheels, are perfectly true.

All locomotive wheels are finish machined in the lathe after mounting on the axle protruding through the wheel to run in a centre in the tail-stock.

This practice has been tried on several HO locomotives with impressive results.

The two-rail system of power supply is satisfactory and due to the continuous running, relatively little trouble is experienced with dirty rail and consequent stalling.

However, one of the first models, a suburban parcels van, had a flywheel fitted to the motor and the effect on running was noticeable. A seven car suburban set was similarly fitted and this proved conclusively that the flywheel was responsible for the improvement in running. Apart from smoother starting and stopping which was the primary reason for fitting a flywheel, the running generally is improved by being much smoother. This is most noticeable when running long trains such as the twelve and fourteen car passenger trains.

The reason is thought to be that even with continuous running some dirt does lodge on the rail and interruption is of very short duration but has a noticeable effect on motor speed. A series of such interruptions makes the motion of the vehicle slightly jerky, just discernable, but nevertheless apparent when compared with a vehicle equipped with a flywheel. The flywheel smooths out the changes of speed of the motor as the current is interrupted and so the motion of the vehicle is more uniform.

The flywheels are quite small, about 13/16" diameter and 3/8" long, but of course the larger the diameter the more effective. Several HO locomotives on a private layout have been fitted with flywheels 1" in diameter and the result is that they will coast over dead point blades, with of course a noticeable change in speed.

It is possible to run quite well on track so dirty that any other locomotive will not operate at all.

It is considered that a flywheel mounted on the motor shaft is the only satisfactory way to overcome the problem of dirty rail which seems to plague all two-rail systems.

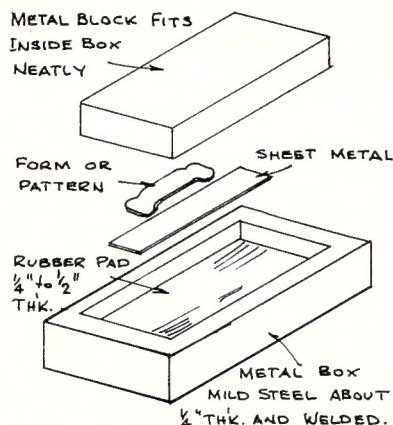
One word of warning is however necessary. The flywheel must be as near to perfect balance as it is possible to make it. Any out of balance will cause vibration of the vehicle and

greatly diminish the adhesion. Happily, good balance is easy to achieve, provided the material of the flywheel is free of blow holes if made of lead or other cast materials.

The flywheel is machined as accurately as possible and then after mounting on the motor is given a final true up. The motor can be held in a vice, powered and light cuts taken off the flywheel with a sharp chisel or scraper held in the hand.

Mention was made of the forming of bogie sides by pressing.

The method used is simple and requires only some method of applying pressure such as a vice, lever or small press and a strong arm.



Known as the rubber die process it consists of pressing a pattern or form into sheet metal backed up by rubber. The rubber deforms to the shape of the form and in doing so presses the sheet metal to the same shape. The resultant

sheet metal pressing is usually trimmed to the required size before removing it from the form.

Sheet brass up to .006" thick can be formed to quite complicated shapes but must be softened by heating to a red heat and allowing to cool, before use.

The form is preferably of metal but for simple shapes requiring not much distortion of the sheet metal, a plastic form can be used.

Plastic such as 'Perspex' is satisfactory for such components as conical or spherical dished tank ends, pressed metal wagon ends and sides.

The rubber is of medium hardness and may be inner tube cut to suit and several thicknesses stuck together to give $\frac{1}{4}$ " to $\frac{1}{2}$ " thick. The deeper the forming the thicker the rubber must be.

It is best to constrain the rubber in a box but this is not essential for small work. The figure shows a typical set-up in exploded view.

For some work aluminium foil can be used instead of shim brass and even paper or cardboard can be embossed using this process.

I have made the following components for TT and HO vehicles using this process.

Brass:

Bogie sides, oil tank ends, conical tank tops, grain wagon hopper bottoms and hatches, louver wagon sides, ends and roofs.

Aluminium:

Corrugated sheets for buildings and cab roofs. Ribbed sheets for containers and Flexivans.

The process has been extended by other builders to box and louver wagon sides and ends in HO and O gauge using sheet brass, aluminium and zinc.

Product Review in brief

Twin Colour Signal and Crossing Signal

Manufacturer: Tenshodo, Japan.

Price: Colour Sig. — £1.29.

Crossing Sig. — \$1.50.

Supplied by: Sydney Model Railroad Supplies, Belmore.

Both of these signals are HO scaled and based on American prototype. Most readers with knowledge of Australian prototype will notice the very close similarity.

The colour signal is intended for use at points where track branching takes place. The crossing signal is used at crossings not usually protected by booms or gates such as in country towns.

Construction is of metal throughout, with "grain of wheat" lamps fitted.

White mast, black ladder and base together with a black target face make the colour signal a very colourful unit. No pun intended. The crossing signal is painted silver except for the black target faces and notice board.

The two signals have between 2 to 3 inches of wire leads which is more than adequate for any type of layout base mounting.

Dimensions for the colour signal are $3\frac{1}{2}$ " x $\frac{3}{4}$ " x $11/16$ ", the crossing signal measuring $2\frac{5}{8}$ " x 1 " x $\frac{3}{8}$ ".

Lamp bulbs used are of a 12 to 15 volt variety and readers are strongly advised to use a voltage of approx. 10 volts to help increase lamp life and to obtain a more realistic glow from them.

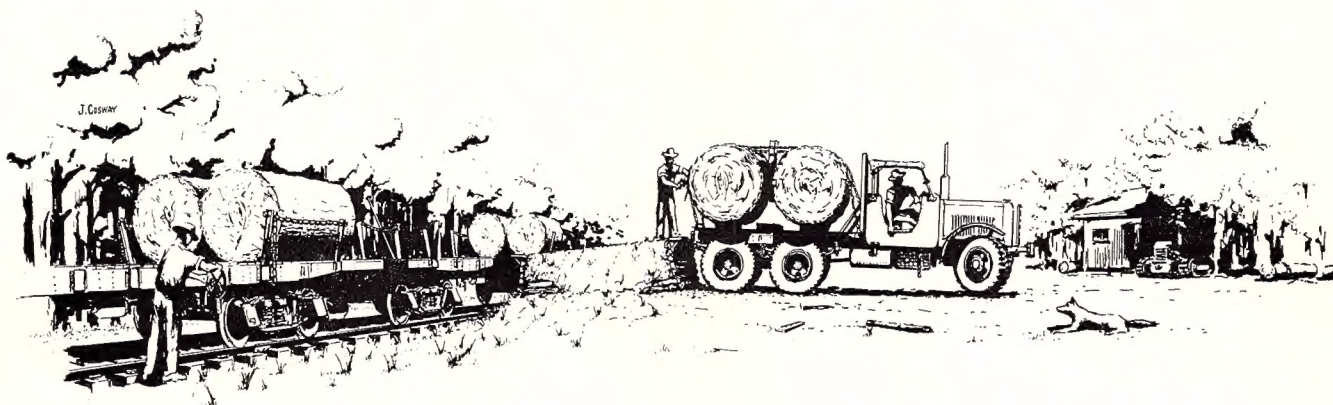
The models are quite rigid and strong while workmanship and finish are beyond reproach.

Other models available from this manufacturer are a semaphore signal, a 3 colour signal and a 2 colour signal. All possess the attributes of the two models discussed here.

These signals are a truly excellent buy and so are strongly recommended.

SAWMILL SIDING

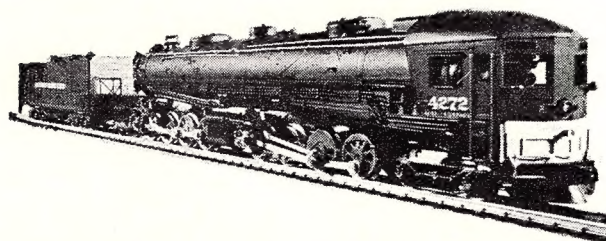
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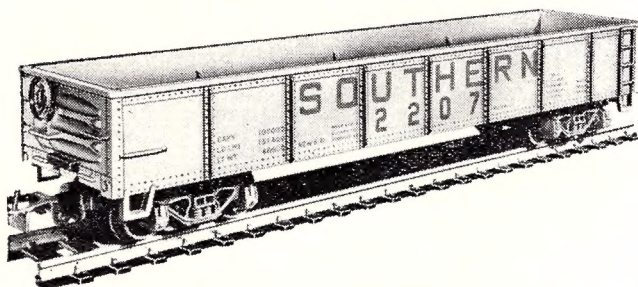
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The best in every way

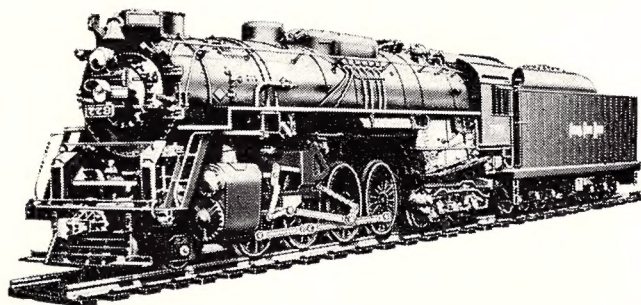
"THE BIG BOYS ARE COMING — HURRAH! HURRAH!" We're now sure of it because they're on a ship, and your Hobbyshop should have the one you ordered, about 15th May. You didn't order one? Well . . . in that case order one now out of the next lot which will arrive June probably. No. 1254—18½ magnificent inches of Union Pacific articulated steam power, 4-8-8-4 with 14-wheel Centipede-type Tender. Pendular transmission, universal joints, powerful traction, beautiful modelling, yet will go around a 16 in. radius curve. Headlight and all regular features **\$69.95**



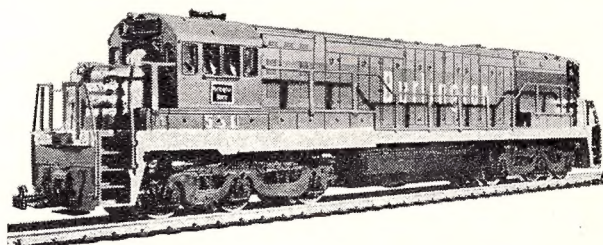
Southern Pacific, cab forward, articulated loco. Great big, ugly, beautiful, lovely, etc., etc. (depending on how much you like them!) now at a new lower price. No. 1248. Price now **\$65.95**.



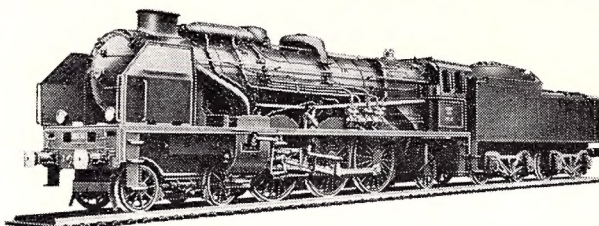
You can search me, I haven't a clue why Gondolas have come back into such great popularity in recent times, but perhaps it is only Rivarossi ones that are subject to this sprouting demand. The illustration shows a kit, No. 12245 for the Southern — red lettering on grey ground, which is identical with the Ready-to-Rolls, except for price and road name. No. 12245 Kit is **\$2.10**. The Ready-to-rolls are of six roads at **\$2.60**, all of which seem popular at the moment.



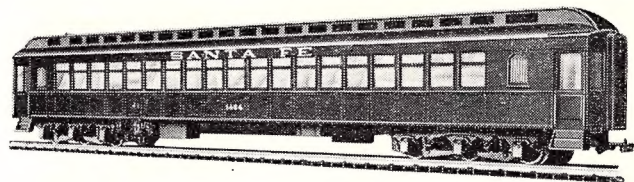
There's that "Berkshire" again! (Told that wife of mine, I simply gotta have one for me birthday!). The price is a little lower than a while back, not that that matters much when you have real beauty. Anyway it is **\$43.95**, No. 1244 and of length, 14 in. Nickel Plate Road. All regular model and mechanical features of "Rivarossi".



The G.E. U25C D.E. Locos with beautiful smooth running are available in three road names, all one price, and all have Rivarossi features. Jim reckons they run even better! Although, that's probably impossible. Nine inches long. No. 1812 Burlington; 1813 Pennsylvania; No. 1814 Northern Pacific **Ea. \$25.95**



Here's a comparative newy you've not seen illustrated! A beautiful model of the French SNCF-type 231E Pacific 4-6-2 with most of its inside on the outside. Beautiful running loco. Just on 12 in. long. No. 1336. **\$45.75**



One of the five Santa Fe full scale length, clerestory roofed coaches with internal seating but no lights, six wheel bogies. This is the day coach sitter style as opposed to the luxury of the Pullman cars. Nearly 11 in. long. No. 2743, price **\$5.85**; other Santa Fe coaches are numbered 2716, 2717, 2718 and 2732 Combine, Pullman, Observation and Diner respectively. All **\$5.85** each, plus 10c on the Observation Car. They are cars from the Golden Age of Steam.

There are so many "Rivarossi" lines from which to choose. You need a Catalogue priced at 65 cents, and a new Price List (Australian) No. 2/2 of April, '67.

"Rivarossi" tops in Locos, Rollingstock and Tramways and is available from Hobbyshops throughout Australia.

If in difficulty & for trade supplies —

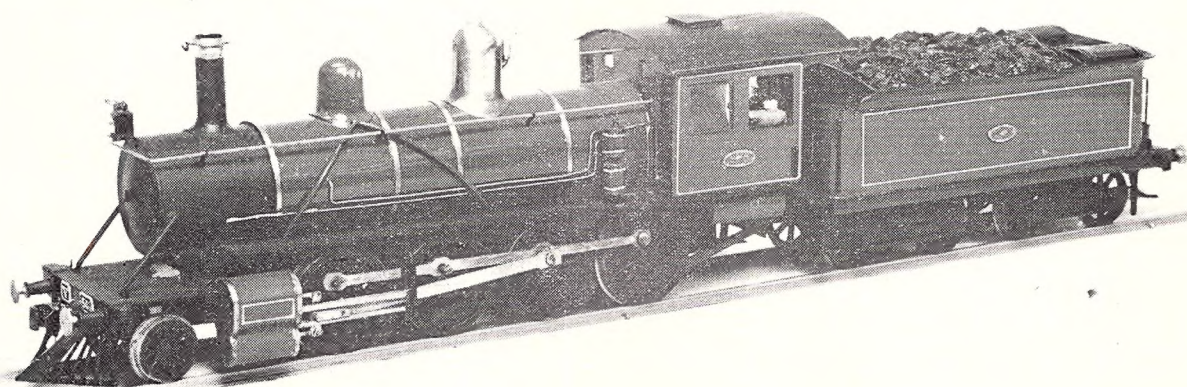
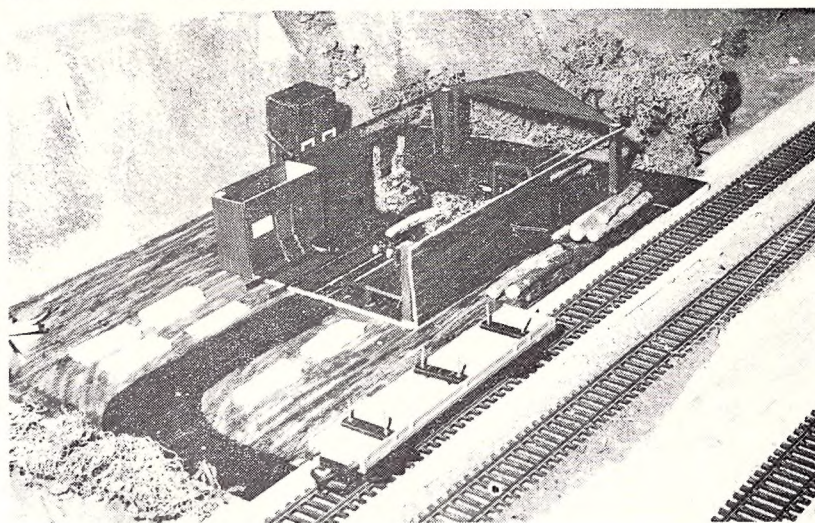
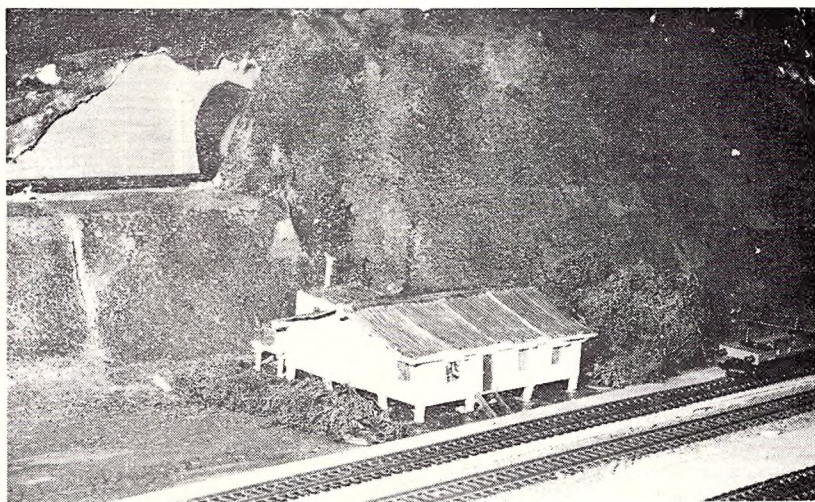
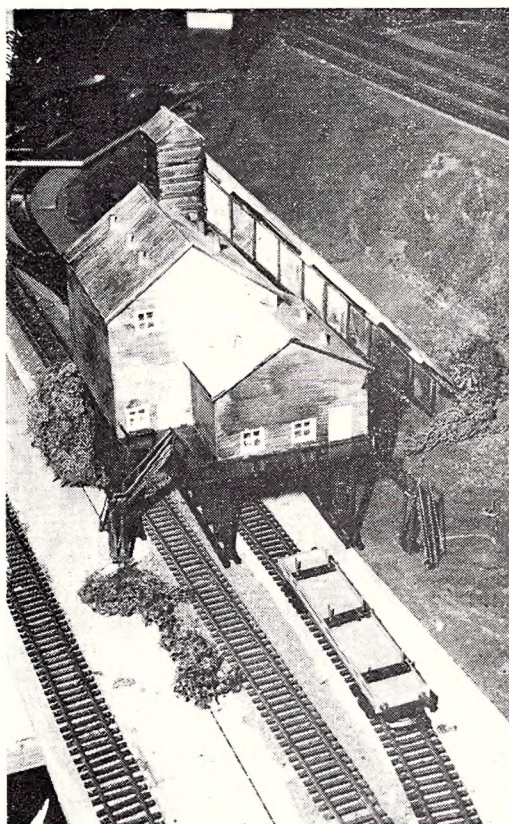
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Australian Distributors



the scenic
route



Last December the Upper Burnett Model Railway Club held a Model Structure Contest and three of the entries are featured above. Top right: Mrs. D. Smith, wife of Arnold Smith, Club President, won first prize with her well detailed copy of a Queensland Railways departmental cottage. Centre: Ron Abbott received third prize for his sawmill. Complete, except for the roof, a lot of interior detail can be seen. Top left: Trevor

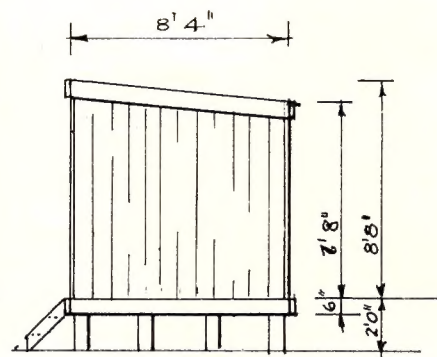
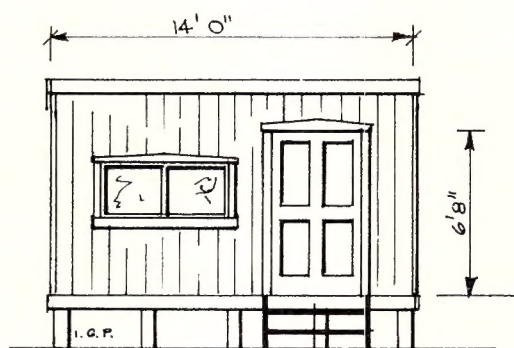
Downing built this model of a coal mine for the competition from balsa and card and achieved second prize.

(Photographs by Harold J. Ware, Monto, Q.)

Bottom Photograph: The prototype for this model is the Victorian Railways' V class Vulcan compound 2-8-0. This model has been built to a scale of 4mm to the foot, with a track gauge of 20 mm. by F. J. Kelly of Essendon, Victoria.

BUILDING SMALL LINESIDE SHEDS

Two simple structures
for Scratch Builders



8" TONGUE & GROOVE SIDING.
CORR. GAL. IRON ROOFING
6" x 6" STUMPS

SCALE : 3.5mm. = 1 ft.

By IAN G. PETHERICK

MAINTENANCE SHED

In the development of a layout we progress from track-laying and early trials of train-running to the addition of structures and scenery.

The accompanying plans show two small structures suitable, alone for a small yard or spur, or together with other structures to be part of a fair-sized depot. The Freight shed, in fact, may be a store shed in a loco terminal, in which case the side, loading platform could be left out. The freight shed should be raised on a base to suit its use for standard gauge or narrow gauge, as later described.

Material for the freight shed is best to be milled capped siding from Austral Modelcraft, or from Northeastern. From these sources also comes 3" scale scribed boarding for the doors and 6" scale scribed boarding for the floor. Ask at any Hobby shop advertised in

this magazine for supplies. The roof can be either commercial "shingles" sheet, hand-made shingles (as described later), or "wet-n-dry" abrasive paper to represent tarred paper.

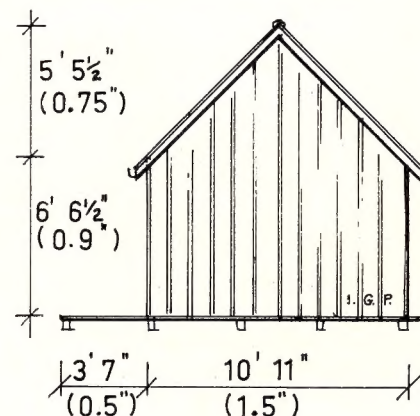
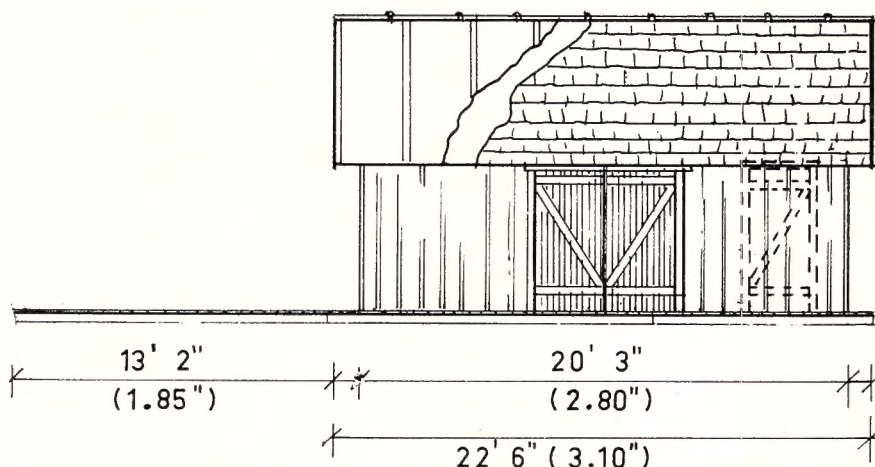
Commence construction of the freight shed by building inner front and rear walls. To get the size of these take the measurements of each side from the scale drawing (to suit your scale) and for the front and back subtract from its length twice the thickness of the material to be used for the ends. These inner pieces may be of plain balsa 1/16" thick, or plain pine 1/16" thick or preferably of 3" scale scribed boarding. Using the last, the scribing will be shown for the planking of the doors.

From capped siding cut out two identical ends to the final dimensions of the end. With the outer face of the end facing down use sand paper on a

block, or a fine file, to bevel the two edges which are to meet at the corners of the shed.

From capped siding cut out two pieces to make the front. These are the two pieces which go each side of the front doors. Cut them to the correct height and width, then, as for ends, bevel one edge of each to match at the corners. Glue these pieces onto the front inner, spacing them the correct distance apart for the door opening. Repeat this for the rear wall. Make a trial fit of the four walls after the glue has dried and if necessary trim or file the mating edges to fit neatly and squarely. Glue the joints and place on a flat surface to ensure the lower edges are planar. Allow to dry.

While this is drying cut out the floor from 6" scale scribed flooring. The size of the side platform is only a suggestion and may be lengthened or



FREIGHT SHED

WITH MEASUREMENTS FOR "HO" SCALE IN BRACKETS

shortened to suit requirements. Most commercial scribed timber is too thick for the scale thickness of the floor. The prototype rarely gets as thick as 2"; the commercial scribing will be at least 1/32" (representing 2 1/2" in HO scale). The four edges of the floor should be rebated on the underside to reduce their thickness near the edge to 1 1/2" scale (a little less than 1/32" in HO).

From 1/16" thick balsa or pine cut the floor joists or use scale 6"x3" timber from the suppliers mentioned above. Glue the joists to the underside of the floor. (Modellers are referred to Jan. '67 issue of A.M.R. Magazine, figure 2, for details of edge and floor joists).

Position shed wall on floor, mark out position with glue and fix in place. Contact adhesive is good for this job, although individuals may prefer some other glue.

For the roof cut out front and back pieces from 1/16" pine or balsa.

Two alternative coverings are shown on the plan. Tar paper is simulated by gluing 200 or 400 grit wet or dry

abrasive paper onto the roof, then adding 3" scale width "cover strap" of thin cardboard. Scribed lines across some panels represent joints in the strips of tar paper.

Various commercial embossed sheets have been available over the years to model shingles. Ask what your hobby shop can supply. From this cut a piece for each roof side and glue onto the timbers.

To produce your own shingles, cut from heavy writing paper, strips of paper a scale 18" wide and every 12" scale apart cut, with scissors, slits half way across the strips. This takes a while but the result is worth the time. The scissors twist the edges of each cut a little and this gives the roughness and texture to match shingles. Starting at the lower edge of the roof glue a strip of "shingles" along the edge. Add a second strip overlapping the first by one third, and continue with overlapping strips until the whole roof is covered. Repeat for the opposite side by again starting at the lower edge.

Glue the roof onto the walls, add the fascia at each end of roof. Make

these of card stock. And from paper used for shingles add the ridge capping glued in place.

The remaining trim to doors — jambs, rails, and diagonal braces may be cut from 1/32" thick balsa, pine, or alternatively from card stock — completes the building ready for painting.

The shed should be placed on a prepared base, or have "stumps" added to bring the floor up to correct height for your own use. The clearance Standards of the National Model Railroad No. S7 give the heights from top of rail to top of loading platform as—

Scale: 0 HO HOn3 TT
Height: 1 9/16" 3/8" 13/32"

Install your shed, and you have one more delivery and collection point of revenue goods for your line.

The Maintenance shed shown can be constructed using the same techniques using 8" scale scribed siding for the outside, 3" scale corrugations for the roof, and remembering to cut both inner and outer walls to fit windows.

PASS EXCHANGE

By ELLIS W. THORNLEY

Have you as a railroader, ever given thought to the branch of the hobby known as "PASS EXCHANGING?" To me it has given many hours of fun, a lot of interest, and introduced me to the whole world.

It is quite a simple matter to design a pass; in America there are printing companies who have a standard type pass upon which they print the name of your railway or railroad plus your name, address, the gauge in which you model, whether you are a member of the N.M.R.A. and also the region in which you are a member. The background is either a steam or diesel loco in any colour.

If you decide to have a pass of this nature it will be necessary to have a block made for every colour that you require. This can become very expensive as each block costs in the vicinity of \$6.10.

A very simple pass is a block with a design of your choice which can be used for a colour design. Upon this design is placed the necessary black printing disclosing the facts of your railroad.

When thinking of a design draw a

square, rectangle or circle ranging in size from that of an ordinary business card up to size which fits into a normal envelope. My pass for the "Heron Line" measures 5 1/4" x 3 1/4" and the pass that I made for my branch line was an ordinary business card size.

As an example I decided to make up a pass for my branch line (to be). I wished to have some timber sidings on a hill, a small bush town and, at a junction with the Heron Line, a timber mill owned, of course, by the railway. Taking my own name I turned, twisted and bent it until I came up with a long T that fitted in with what I had in mind, namely a Timber Line and also a Trading Co.

I drew it out on a piece of cardboard to see what it looked like. Then I took it to the printer and he was very happy to advise me on the correct size of type so that it would look right. I have found that the printers are very helpful and readily give advice, so long as you take to them your ideas written down.

The word "pass" I desired in a different colour, so I had a rubber stamp made in preference to having the passes run through the presses again; this cut the costs a little.

My passes are all sent out by ordinary mail; 4c to anywhere in the Commonwealth and the British Empire, 7c to anywhere else in the world. This helps to cut costs and the majority of the letters arrive, very few having been lost. Airmail rates vary from 20c to 25c depending on the country.

Many friendships are to be had; also you learn of other people's railroads, their problems and wants. Sometimes there is something that you wish to know about and you always receive a reply, advising you or telling you

where the information can be obtained; such is the interest of these pass exchangers throughout the world.

Once you have a pass printed send one to:

John F. Keavy, 504 Peckham St., Fall River, Massachusetts 02721. U.S.A.

Your name will then be printed in the N.M.R.A. bulletin which is sent to all members. Those with passes will soon send theirs to you. Another way is to send one to the Editor of the A.M.R. Magazine. If you send one to me I will send you a list of Australian Pass Exchangers. Address: 4 Weeroona Ave., Elanora Heights, N.S.W.

I hope that you will give this interesting part of the hobby some thought.

BOWSER LOCO KITS AVAILABLE DIRECT OR THROUGH YOUR DEALER

Send International Money Order available at your post office. It is really easy to do.

WE WILL PAY 1/2 THE SURFACE RATE, SO ALLOW ABOUT 10% FOR POSTAGE.

If you overpay, you will receive credit toward future purchases.

Direct only we can also supply materials of other manufacturers which are advertised as being available through dealers in the U.S. — Cal Scale, Kemtron, Labelle, Ambroid kits, Cary Loco Works, Tyco, Kadec, Athearn, Central Valley, Walthers, Silver Streak, Varney, Model Die Casting, Quality Craft.

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PASS

"THE THIN LINE"

ELLIS W. THORNLEY
GENERAL MANAGER

N.M.R.A.—S.C.R.

H.O.

BOOK REVIEWS

A CENTURY PLUS OF LOCOMOTIVES

by A.R.H.S.; \$4.50

with foreword by C. A. Cardew,
former acting C.M.E., N.S.W.G.R.

This book is a reprint of A Century of Locomotives, being a survey of N.S.W.G.R. locomotives from its beginning in 1855 to 1965. It thus covers all locos from No. 1 to 7201 and gives an adequate history of each class, plus some technical details but, unfortunately, the basic dimensions such as length, height and wheel diameter are omitted. The photos are usually good, but some aren't very good from the modeller's point of view.

All in all it is a good buy as it is the only book containing all N.S.W.R. locos and for the rail fan it is a necessity.

A CAVALCADE OF NEW ZEALAND LOCOMOTIVES

by Palmer & Stewart

This is a complete survey of locomotives of N.Z.G.R. and the lines it took over — the early provincial railways and the private lines such as the Wellington and Manawatu Railway.

Each loco gets a photo, a short history plus technical details, but unfortunately only the driving wheel diameter is given and the basic dimensions are mostly omitted.

Narrow gauge fans will enjoy this book which contains many of the finest 3'6" gauge locos ever made and includes steam, diesel and electric plus battery electric, geared logging locos and contractors' locos.

GREEN OVER RED

This little duplicated booklet is a new venture which is printed privately by three Victorian enthusiasts. Moderately priced at 5 cents (6 issues for 40 cents posted) it should prove interesting to railway enthusiasts interested in the prototype and its workings.

The issue forwarded to us for review contains articles on The Staff and Ticket System and Dieselisation in Tasmania, together with a plan of the Tasmanian Government Railways "X" Class General Purpose Diesel Electric Locomotive.

The back page is devoted to Australian buses in general with promises that future issues will discuss various individual bus systems.

The booklet may be ordered from Box 145, P.O., Box Hill E.11, Victoria.

AUTHORS

Articles wanted on construction of scenery — contact Ed.

HANDLING SYMBOLS



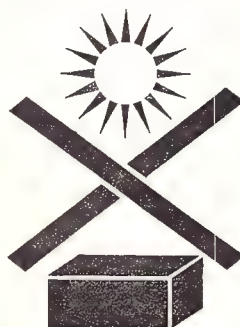
FRAGILE - HANDLE WITH CARE
FRAGILE - USARE CAUTELA
ZERBRECHLICHER INHALT



USE NO HOOKS
NON USARE GANCI
KEINEN SCHAUERHAKEN VERWENDEN



THIS WAY UP
ALTO
OBEN



KEEP AWAY FROM HEAT
TENERE LONTANO DAL CALORE
VOR HITZE SCHUTZEN



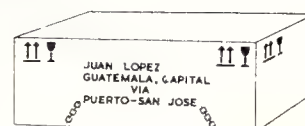
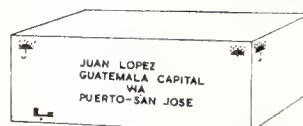
SLING HERE
AGGANCIARE QUI
HIER ANHEBEN



KEEP DRY
TENERE ALL' ASCIUTTO
VOR NASSE SCHUTZEN



HEAVY WEIGHT THIS END
PARTE PIU PESANTE
SCHWERPUNKTSBEZEICHNUNG



EXAMPLES OF USE OF SYMBOLS

STANDARD HANDLING SYMBOLS

The Standards Association of Australia has released a poster illustrating seven standard symbols on packing cases to indicate the correct handling technique for any consignment.

Operating on the sound principle that a picture is worth any number of words, particularly when the handler does not understand your language, the seven symbols clearly illustrate the correct and safe procedure.

Copies of the poster, illustrating the symbols and their application, are now available from the offices of the Standards Association for 30c each.

HURRY

Send Vol. 2 for binding NOW
\$3.70 per Volume.

We suggest that to protect your copies that they be covered top and bottom by pieces of thick cardboard and wrapped well.

Include cheque or postal order made payable to:

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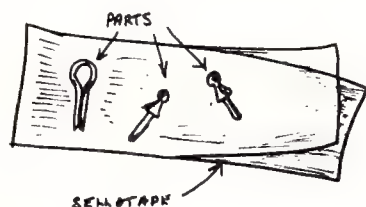
Binding Dept. S.C.R. PUBLICATIONS
189 Homer Street, Earlwood, N.S.W.

The Smoke Box

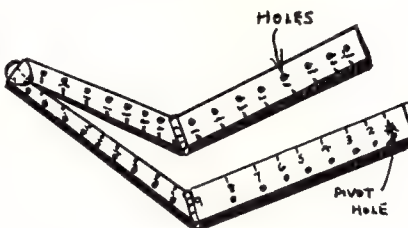
by Fred Gill



For a small culvert under a road or driveway use a drinking straw. Cut it to the right length and paint it to look like the real thing.



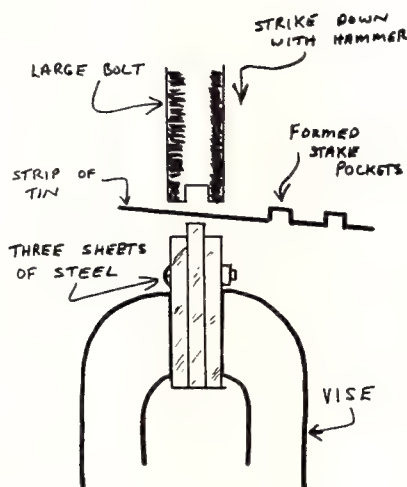
To prevent losing small parts like handrail stanchions place such parts between two pieces of Sellotape. You can see the parts, and use them as you need them.



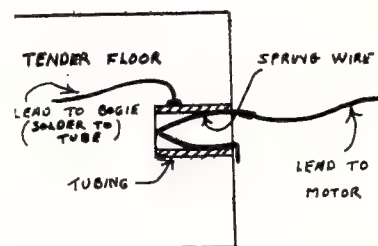
Drill $\frac{1}{16}$ " holes on the inch marks of a 3' folding-rule. Also drill a pivot hole at the 1" mark. You now have an all purpose trammel as well as a ruler.



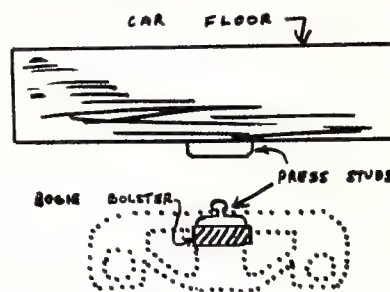
Drill a press-fit hole in the end of a length of dowel for the handles of your small files and see how much easier they are to use.



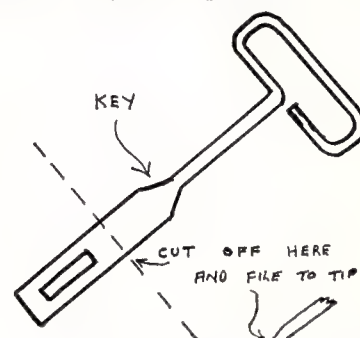
The sketch shows a simple die with which uniform stake pockets can be made. The male die consists of three pieces of sheet steel bolted together and the female die must be as wide as the centre sheet on the male die plus twice the thickness of the tinplate that will be used.



A brass tube forced into a hole, or soldered, to the tender floor and a lead then soldered to the bogie bolster, will make a very good electrical connection for pickup. Shape a piece of spring wire to "force-fit" inside the tube and to this wire solder a lead to the loco motor.



For an easy way of removing bogies use the method shown. Glue a press stud (female side) to the base of the car floor or underframe. To the bogie bolster glue the other side of the press stud. Now all you have to do is snap your bogie into place. Another advantage of this method is that the bogie is "equalised."



The opening key that comes attached to vacuum-packed foods can be fashioned into a handy little screwdriver by filing a wedge tip on the end.

THE RE-BUILDING OF WINGROVE STATION

PART TWO

THE BIG CHANGEOVER

by JACK McLEAN

Firstly, I cut all the wires. Then I pulled out all the spikes which held the track to the baseboard, recovered all the fish plates, and stacked all the points and pieces of track because of course they all had to be used again. Then up came the Masonite.

There had been several uneven spots in the original baseboard and this was the chance to fix them.

Two new sheets of Masonite .8 feet by 18 inches were carefully fitted into place and the track laid out, sawn, fishplated, and spiked into its new position. Twenty-eight words twenty-eight hours.

The Masonite was laid with the original sides to the front so that the front of the new baseboard presented a perfectly straight line. This was of great value in laying the straight track which was carefully measured from the baseboard front. Most of the old wires were cut in such a way that little tags of wire were left soldered to the rails.

These were now attached by twisting, to the wires from the old control panel as a rapid temporary measure to get the station operating electrically as soon as possible. The switches in both the old and the new control panel have been arranged in geographical positions and pencil lines were therefore drawn on the front of the old control

panel to indicate the geographical position of each switch in its new use. The new control panel was not installed until a few weeks later.

BUILT IN A WEEK

The last train had been run ceremoniously into and out of the old station at 2 p.m., real time, on the Saturday afternoon and I was able to run a train into the new station at 4 p.m. real time the next day. However, at that time only a single line connected Wingrove to Mason Street and it was not until Monday night that double line working was resumed. Most of the track had been laid by the next Friday and I was very pleased to operate Working Timetable No. 26 at Wingrove that night when we had quite a session, with punctuality at least as good as usual. I think that it is quite a creditable achievement to have completely rebuilt the track work at a station this size in the time, particularly as the preceding and following Friday nights were business as usual. The present station layout is shown in Fig. 4.

EFFECTS OF RE-ARRANGEMENT

The re-arrangement of the station with far less platform length and less facility for running round has made it necessary to have carefully planned platform working. Previously there was no trouble in handling almost anything

that might happen there. The ability to transpose trains and/or platforms readily, meant that the operator didn't have to plan ahead very carefully. At the new station this no longer applies. Each train has an allotted platform at which to arrive and the arriving engine is detailed as to its next movement.

DROP ON ENGINES

The term Drop On Engine might conveniently be explained here. This is a Victorian Railways term to describe the attaching of an engine in the rear of an arriving train to take it back in the direction from which it came. This is in contrast to the running round of the engine and its attachment at the rear.

The term also refers to crews, a drop on driver and guard waiting at the rear and front respectively of an arriving multiple unit electric so that the train can reverse out immediately instead of having to wait until the arriving crew change ends. Other railways use different terms for the same idea.

GRAPHICAL PLATFORM DIAGRAMMING

This need for planning station movements caused me to develop a graphical system to simplify the planning and ensure its accuracy.

Wingrove timetables have always been compiled on a graphical basis in which distance is plotted against time in the same way as on the prototype. Although the platform arrangements at Flinders Street are plotted graphically there are no engine movements involved. The platform arrangements at Adelaide are (or anyway were) far more interesting but were compiled mainly by memory which might have been all right for the professional, but no good for the amateur doing this once every six months or less.

The method I developed is as shown in Fig. 5. In addition to the horizontal lines representing the five stations and the locomotive depot, there was another group of seven lines to represent the following:

- Siding A
- Siding B
- Main Line
- Siding C
- Platform 1
- Platform 2
- Platform 3

DEMONSTRATION TIMETABLE

The timetable shown in Fig. 6 is an extract from one which we have prepared for occasions when we give demonstrations such as to the Men's Club of the local church, and the timetable

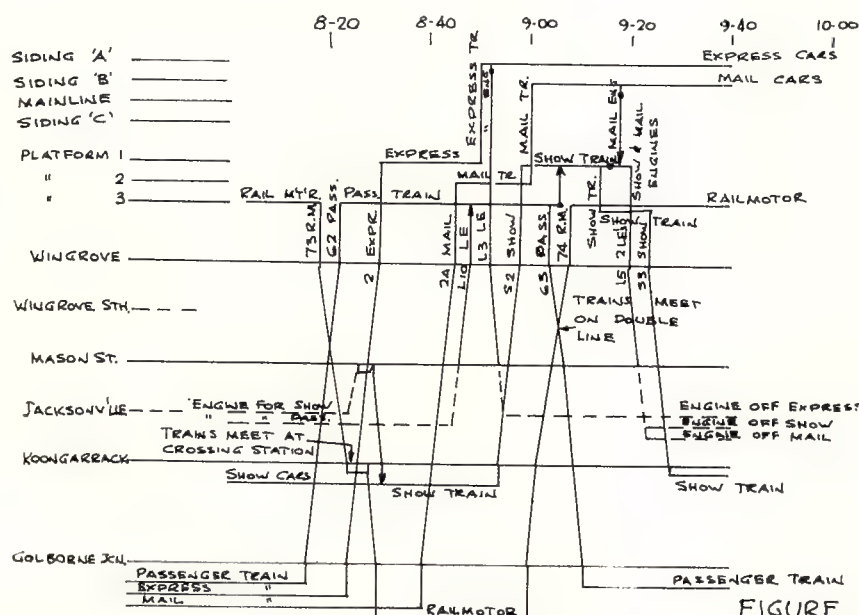


FIGURE 5

The Australasian Model Railroad Magazine

Volume Two

February/March, 1965 — November/December, 1966

Nos. 12-23

S.C.R. PUBLICATIONS

New South Wales,
Australia.

Supplement to THE AUSTRALASIAN MODEL RAILROAD MAGAZINE for May/June, 1967.

Annual Index for Volume 2.

NOTE: The first figure after each entry refers to the issue number of the magazine in which the entry may be found. The second number refers to the page in the magazine. A series of such paired numbers indicates a succession of articles on the same subject or by the same author. Regular features, such as Shop Window, Shop Detective, Helper Service, The Smoke Box, etc. are not listed.

A

Achievement Program, 18-13, 21-5, 21-18.
A Few Hints on Lining Models, by Jack Grierson, 15-10.
Alcheringa — The End of the Line, by Jim Blaney, 16-17.
A New Painting Technique, by W. J. Christie, 12-18.
An Eye for Detail, by Les Street: Part 2, 14-20.
Part 3, 18-12.
An Oil Depot in Four by One, by Jim Blaney, 19-16.
A Page of Hints for Idle Moments, by Bert Coppin, 19-18.
Armidale, Tamworth & Barraba Branch, by Stephen Mansell, 20-20.
Armstrong, Howard, articles by:
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is referred to as the Sunday School Picnic. The complete timetable consists of trains run in such a way that at the end of half a real hour there are the same number of trains and engines at each of the stations as when the timetable started. This is called balancing.

GRAPHING A TIMETABLE

One of the trains shown is No. 6 Express, an up train. It leaves Golborne Junction at 8.24. On the graph is found and marked the intersection of the horizontal line for Golborne Junction and vertical line for 8.24. The express passes through Koongarra Creek at 8.26 and so the intersection of the 8.26 line and the Koongarra Creek line is marked.

Similarly the Mason Street 8.28 and the Wingrove 8.30 intersections are marked. When these four intersections are joined they make a sloping line bottom left to top right. This is known as the theory line of the train. If it were a down train the slope would be top left to bottom right.

These theory lines must not cross on single line except at stations, just as the trains themselves cannot do so. They can cross between Wingrove and Mason Street because this is double line. Wingrove South and Jacksonville are treated as if drawn on different levels as they are branches.

GRAPHING ON PLATFORM MOVEMENTS

As shown in the timetable the express arrives in Platform No. 1. To record this fact on the graph the theory line is continued up until it meets the No. 1 Platform line. It is supposed that the express will wait in the platform until 8.50 and so the theory line is continued along the No. 1 platform line to the 8.50 line. The train engine then pushes the cars into Siding A so the theory line is continued upwards to the Siding A line. Two mins. later the engine is detached, an action denoted by the black ball on the theory line, the engine runs light back to Jacksonville loco depot as shown for L1 Light Engine and by a sloping line on the graph.

A passenger train has arrived in No. 3 platform at 8.22 which reference to the plan will show has no run round facilities. Therefore the train will need a fresh engine to take it out. The fresh engine is shown in the timetable as L10 Light Engine arriving at Wingrove at 8.48 and described as for the 9.04 passenger train from No. 3 Platform. The arrow on the graph denotes a coupling action.

In the meantime the Mail has arrived in No. 2 Platform, the graph having shown that both No. 1 and No. 3 platforms are occupied at that time. The Mail is pushed out to Siding B at 9.00. The 8.58 arrival Show Special from Koongarra Creek comes into No. 1 Platform from which the Express has recently been pushed to Siding A.

FIGURE 6

WINGROVE HARBOUR RAILWAY

Special Working Time Table (Extracts From)

Down Trains	73 RM	51 LE	L3 LE	63 Pass.	L5 2 L.E.'s	S3 Show
Platform	3		1	3	1	3
WINGROVE	8.18 X 62	JLD dep 8.24	8.52	9.04 X 74	9.20	9.24
MASON STREET	8.21	8.29 X 2	8.54	9.07	9.22	9.26
JACKSONVILLE			8.55		9.23	
KOONGARRA CK. arr.	8.24 X 2	8.31 Runs S2	Off Exp.	9.09	Off Mail & Show	9.28
GOLBORNE Jen arr.	8.30			9.11		

Up Trains	62 Pass	2 Expn.	2A Mail	L10 L.E.	S2 Show	74 RM
GOLBORNE Jen. dep.	8.16	8.24	8.39			9.00
KOONGARRA CK. arr.		X 73				
dep	8.18	8.26	8.41	For Pass.	8.54	9.02
JACKSONVILLE				8.45		
MASON STREET	X 73 8.20	X 51 8.28	8.43	8.46	8.56	X 63 9.05
WINGROVE arr.	8.22	8.30	8.45	8.48	8.58	9.08
Platform	3	1	2	3	1	3
Cars Work	9.04	8.50 S	9.00 S	—	9.24 A	9.52
Eng. Works	9.24 A	8.52 LE	9.12 LE	9.04	9.20 LE	—

NOTES: S-to Sidings; A-Engine Drops on to Show Special in No. 1 as
X Meets Train 9.06 Then Shunts Train From No. 1 to No. 3 at 9.14

When the 9.04 passenger train departs from No. 3 Platform it leaves behind it the engine which brought it in. This is shown by the short horizontal line with the black ball on it. The engine leaves the platform at 9.06 (to make way for the 9.08 arrival Rail Motor) and moves over to No. 1 Platform and couples on to the Show Special. Show Specials arrive in any Platform but for the convenience of the passengers we make some sort of an attempt to depart them from the island platform. So, the Show Special is shunted from the No. 1 Platform to No. 3 Platform at 9.14 and thus occupies the same platform as the Rail Motor which the graph conveniently shows.

The engine off the Mail, after shunting its cars to Siding B, now backs into No. 1 Platform where it couples to the engine of the arrival Show Special, and the two light engines depart for Jacksonville Loco Depot at 9.02 as shown in the timetable for train L5, thus completing the movements shown in the extract. Believe it or not all this is done according to Wingrove Standard Time which is about an hour in seven minutes.

It may be seen from this description (at least I can see) how the graphing of the platform arrangements:

1. Allows the complete movement of a train to be traced from arrival in the station to departure.
2. Draws attention where applicable to the need for a drop on engine.
3. Enables a vacant platform to be allocated for an arriving train.
4. Causes a platform to be vacated in time for an arriving train.
5. Records the fact that two trains are occupying a platform at the same time.

And maybe a few other things.

We are very pleased with the new station particularly as the fewer facilities have introduced new operating problems which we have had a lot of fun solving.

And, of course, we are equally pleased that we were able to build the new station without interrupting the service.

Joining The Southern Cross Model Railway Association? Then write for Application Form To:

THE SECRETARY S.C.M.R.A.

61 Hewitt Ave., Wahroonga, N.S.W.

THE BROTHERHOOD OF RAILROAD TRAINMEN CABOOSE CONTEST IN AUSTRALASIA

Due to unavoidable problems, this Region of the NMRA, was not able to participate in the original Contest, last year. However, due to the generosity of the Brotherhood, and particularly that of Mr. Nat Howard II, of the Caboose Committee in the US, the Southern Cross Model Railway Association, is now able to conduct the Contest.

The prizes offered by the Brotherhood are:

First	\$US100.00
Second	50.00
Third	25.00

Contest Rules and Entry Forms are available from the Chairman of our Regional Committee, David Ashton, by forwarding an addressed, foolscap stamped envelope, endorsed "Printed

Matter". Postage stamps required will be 7 cents.

Additional information is available from the Model Railroader, October 1965 issue, and the Railroad Model Craftsman, October 1965 issue.

Closing date will be Sept. 15, 1967, and all entries must be in the hands of the Committee Registrar by that date. Prize winning models will be on display at the Model Railway Exhibition at the Sydney Town Hall, in October, and the Committee will welcome the opportunity to display any and all Caboose models at that time.

Extra copies of this magazine can be obtained from S.C.R. Publications or from the competition chairman at 35 cents each, posted, if you do not want to mutilate this copy.

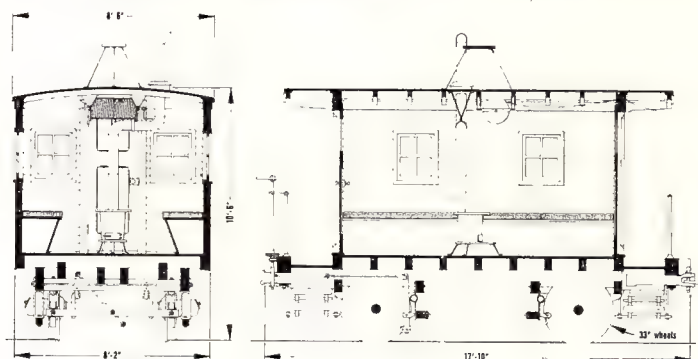
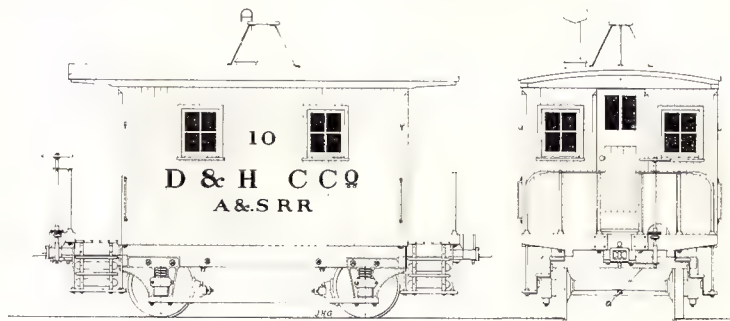
Judging will have regard for the NMRA Achievement Award Programme Regulations.

Enquiries, application and SAE's to:

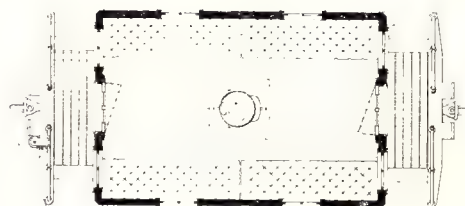
Chairman Caboose Contest,
Mr. D. C. Ashton,
3 Edgecombe Ave.,
NORMANHURST, N.S.W.,
Australia.

SPECIFICATIONS

Length over buffers	17'10"
Length over end sills	16'10"
Body length	12'2"
Body width	8'2"
Height of side	7'0"
Roof length	16'5"
Roof width	8'6"
Roof crown	21'0" rad.
Roofing	Tin
End sills	7"x8"x8'2"
Centre sills	4"x8"x16'10"
Intermediate sills	4"x8"x16'10"
Side sills	4"x6"x12'0"
Floor beams	3½"x6", 17½" spacing
Truck frame	4½"x12"x12'0"
Wheelbase	8'6"
Wheels	33" diameter
Journals	3½"x7"
Journal box lids	Pivoted
Cast-iron pedestals	D&H pattern, pat. June 25, 1872
Pedestal binder	3"x3" oak
Brake beams	4"x6" oak
Brake hanger beams	4"x6"
Brake pushoff springs	½"x2" steel
Cross tie rod	¾" diameter
Compression rod	1½" diameter
End railing stanchions	1½" diameter
Splashboards	Wood, bright red
Buffers	Wood blocks, iron facings
Lantern hooks	Black iron
Smokepipe	5" diameter
Roof lookout seat	Wood; iron legs
Window sash	Fixed
Glass size	7½"x9½"
Couplers	Link-and-pin
Interior roof carlins	1½"x2½", 17½" spacing
Side and end walls	3½" thick
Coal stove	Black cast iron
Seat cushions	Tufted black oilcloth, 3" thick
Bunk lids	Hinged
Signal cord reel	½"x13" dia., ¾" axle



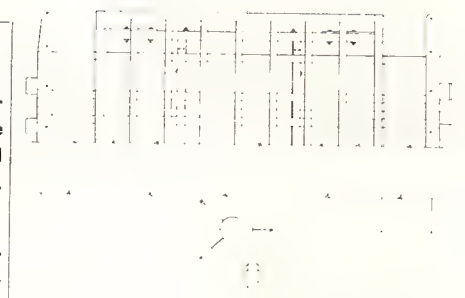
Drawn for the Brotherhood of Railroad Trainmen
J. HAROLD GEISSEL



PAINTING

Exterior: Body, bright red; roof, plat-
forms, and wood underframe
parts, freight car brown; all
ironwork, black; lettering,
white.

Interior: Walls and roof, ocher; floor,
freight car brown; ironwork,
black.



YARRAGONBILLI JUNCTION

By NORMAN COOPER

To the local aborigine tribe in the area, Yarragonbilli means "end of tall land." To the station owners in the surrounding foothill areas, Yarragonbilli Junction is the railhead where his sheep or cattle are taken to be transported away to the abattoirs or sale-yards.

To me Yarragonbilli was keeping me in touch with railway modelling while serving overseas with the Australian Forces.

The local shops did not have a wide variety of goods to select from and as the rolling stock and locomotives I use in Australia were not readily available there I was forced to build a small layout, using proprietary track and kits.

In the beginning I had to select from Hornby, Tri-ang and Marklin. Enough Hornby track was bought for a simple layout and it was decided that a small country halt would be ideal.

The hill country was built by cardboard boxes glued to the 8'x4' wooden base, and newspaper glued across the tops. After drying, more newspaper was bunched up and laid on top. Over this, wet newspaper sheets were laid and the effect of the wet newspapers gave some very pleasing contours. Over all this a thin coating of glue was painted on and sawdust sprinkled over.

The cutting is a small piece of $\frac{1}{2}$ " caneite, broken into lengths of two or three inches long by an inch wide and tacked together.

The painting was done with poster water-paints and inter-mixed while the previous colour was still wet.

In the yards where thousands of sheep have eaten all the grass and trampled everything to dust, the base-board was coated with glue and sprinkled with fine sand. Painting was done by the same method as the hills.

The railhead foreman's house is a Faller kit and unfortunately is not the style of building I should have liked. The trees around the house are also Faller, but the others are made from wire, glue and sawdust. Animals and people on the layout are by Airfix and Merit. Fences are matches as are the signposts, telephone-box and the old wooden platform.

As I was to return to Australia by a certain date I did not consider it worthwhile converting the points to work by rods or even electrically, and because of this there is an unreal appearance, although my sons don't seem to mind.

I took two locos from Australia, an 0-6-0 Tenshodo Baldwin and an 0-6-0 Ken Kidder. While in Malaya I bought two Revell 80-80 diesels of a design similar to one of our Victorian prototypes.

Fleischmann came onto the market a few months prior to my return and an Alco cab loco was purchased together with a set of double slips which may be noticed in the photographs.

It was hoped to motorise an Airfix railbus and a Kitmaster blue Pullman to form a "Midwest Daylight" consisting of two Pullman power cars, two saloon coaches and a kitchen buffet in the centre, however, the railbus is still awaiting a power unit and we had to wait till our return to Australia to acquire the power unit, a Tri-ang Blue Pullman with converted wheels and bogies.

Other rolling stock consisted of four Revell wagons, a gondola, boxcar and two cabooses. All have sprung bogies

as does my shortened Rivarossi gondola and an anonymous metal hopper kit. There were also two Kitmaster corridor coaches, a restaurant coach, a corridor brake and a clerestory observation car kit by Athearn.

Unfortunately, the Kadee couplings that are used by Pacific Railroads (my road name) were not available and there was quite often some complicated shunting required to make up a train that would couple up. Some of the rolling stock had two different types of coupling systems. The sheep wagons were made up from Airfix cattle trucks with false floors halfway between floor and ceiling.

This is not by any means the full extent of Pacific's loco stud or rolling stock, only those which I had bought or built while in Malaya.

Yarragonbilli Junction is the parting of the line from West to South-West and the traffic is not very brisk. The local does two trips each way between Yarragonbilli and Mandorah the nearest large town, mainly for mail, supplies and the occasional station hand or jackaroo who has a couple of days off.

The "Midwest Daylight" (the old version not the modern blue diesel), hurtles through daily each way while the line that disappears into the hill carries the express "South-West Limited" and the "South-West Mail" which stops to set down and pick-up passengers to and from the State Capital.

All other traffic is freight and sheep trains which have no set timetables and move when possible over the single track.

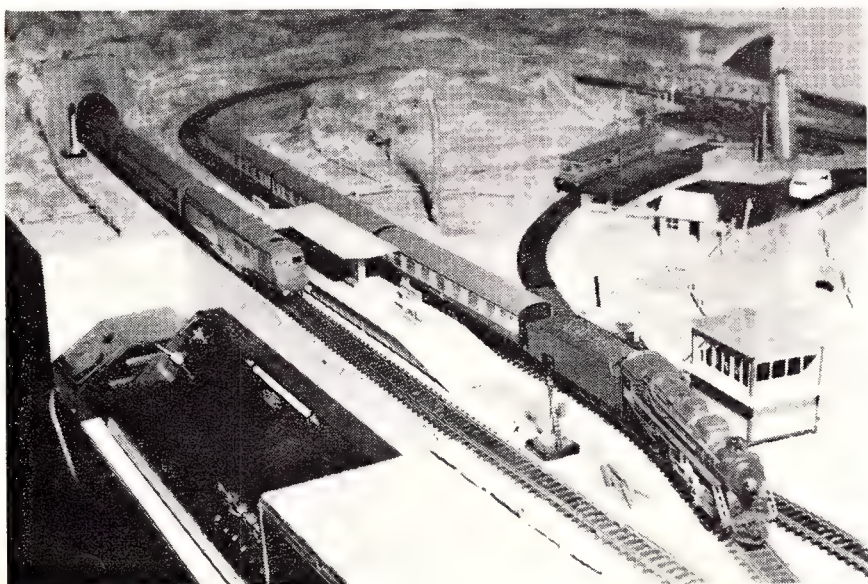
This single line operation tends to bring many extra hours pleasure — and problems in working to a timetable.

Yarragonbilli Junction station signs were made from matchsticks and ice cream sticks and the garden from sawdust, sand and painted.

The signals are all Hornby two colour lights, both home and distant were wired to operate automatically on the changing of the points. Again these are not the normal signalling I use but were all that was available.

Although a small layout, I had built a cab control set-up with a master or panic switch that I could use if my sons looked like getting into trouble. The control panel commands nine separate sections of track although only five were in use on the Yarragonbilli layout. There is room on the panel for extra switches for electrically operated points and more track sections. Marklin plugs are used throughout all wiring and are built into the back and side of the control panel so as to make the whole system portable and for use in later layouts.

Yarragonbilli Junction was built not to stop me from getting homesick but because of the track and operational problems that I encountered there and the fact that it would have to be pulled down after 12 months or so.



CONSTRUCT A N.S.W.G.R. MLE BOLSTER WAGON

BY
J. A. LYONS

This wagon can be constructed very easily using scraps of balsa and a number of simple tools, a rule, try square, sharp knife, a pencil and a small drill. The plan of this model has appeared in "Our Plan" section of the August-September 1963 issue of this magazine. This plan included details of two variations, an FME container wagon and the UME flat wagon. I have drawn this plan to 3.5 mm. scale and sizes may be taken directly off the drawing.

The decking is constructed of $\frac{1}{32}$ " balsa. It should be noted that the grain runs crosswise. To obtain a piece of balsa big enough for this it will be necessary to glue some pieces of $\frac{1}{32}$ " sheet edge to edge. The decking is not glued down till the screws for the

bogies are set in position. The main body is cut from a piece of $\frac{1}{4}$ " sheet. The centre sill is carved from a piece of $\frac{1}{4}$ " square balsa. A piece of $\frac{1}{32}$ " balsa is cut and bent to fit under the centre sill and is glued in place. The centre sill is then glued under the body. It may be necessary to trim the ends of the centre sill depending on the size of the coupling pockets.

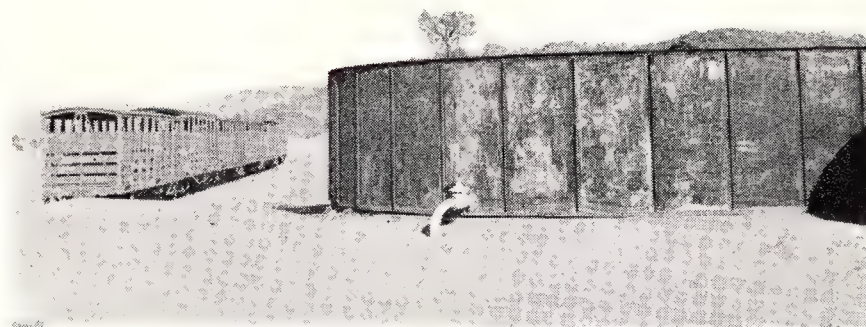
The holes are now made for the screws, a sharp pencil is used for marking the centres and the holes may be drilled by revolving a suitable sized drill between your fingers. I used 8 BA screws cut to a suitable length but the size of screw will depend on the type of bogies used. After the screws are in place the decking can be glued in position.

The headstocks are cut from $\frac{1}{32}$ "

balsa and glued in place. The four bolsters are cut from $\frac{1}{16}$ " square balsa and glued in the positions shown on the deck. The bolster uprights are pins with the heads removed but these are not fitted till the painting is almost completed.

The model should be given at least two or three coats of shellac or balsa sealer. Between each coat the model should be cut back with fine glass paper or wet and dry paper. I painted my model with Humbrol black and then gave it a very thin coat of Humbrol rail paint. This gave the model a well used and rusty look.

To provide additional weight I have loaded the wagon with some pieces of brass rail cut to a suitable length and glued to a piece of cardboard. My model is fitted with X2F couplings.



This is the absolute head of the rails at Alice Springs. The water tank would be a simple model to make and, of course, quite in keeping with the prototype.

(Photo John McCarthy)

Other News from "THE DOCKYARD" ...

(Cont. from page 3)

HOn2½ gauge equipment are now available. The illustrated colour Catalogue, together with price list, being 35c...

'M.E.K.' is now available at 80c per 6 oz. container and is the correct cement for the 6" x 18" styrene panels previously announced... Due shortly from 'Fujiyama' are our first stocks of HO S.P.-T. & N.O. "M-4" 2-6-0...

About the same time K.T.M. are scheduled to deliver the 'West Side' HOn3 Nevada County No. 9 2-8-0 at \$58.00, more O gauge trucks, including a variety of 6 and 8-wheel tender trucks, and an O gauge Tripple Hopper, of panel sided flat end type at \$20.95 (less trucks)...

Talking of O gauge, some of the finest

stamped brass fittings we have yet seen in $\frac{1}{4}$ " scale are just in from K.T.M. These comprise: A-10, Miner Brake Wheel; A-11, Ajax Brake Wheel; A-12, Brake Wheel Housing; A-13, Freight Car Step; A-14, Westinghouse Brake Wheel; A-17, 7 Rung Ladder and Working Brass Hinge. All are priced at 10c each, whilst also available is F-31, Stake Pocket at 8c each...

Adding further to the fine range of items now available in HOn3 gauge, 'Fujiyama' are now shipping a Sumpter Valley Caboose. Watch for a further announcement.

SHOP DETECTIVE

I've heard that the Model Dockyard has acquired the dies for the excellent BPR line of soft metal castings. Full stocks should be on hand shortly.

Perhaps you've always felt that those imported brass locos are quite beyond your means. Well, look again at the Dockyard's display, and you'll probably be quite surprised at the number, HO and HOn3, that sell around \$30. I can't report on their performance, but they sure look good, and the 'Yard stands behind their sales. Also I like the look of the American and European styled locos by Pocher. Scale here appears to be OO.

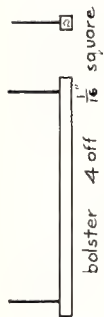
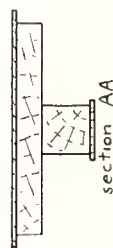
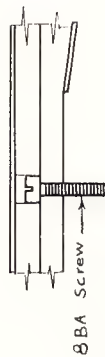
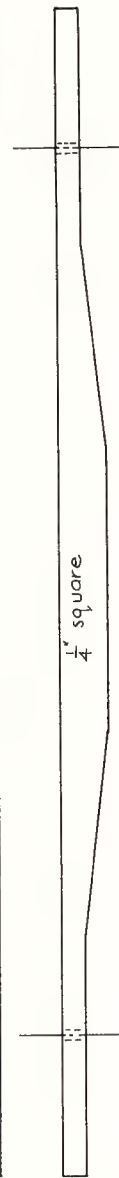
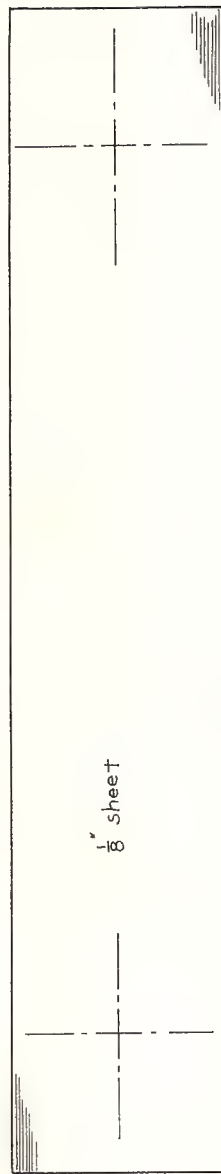
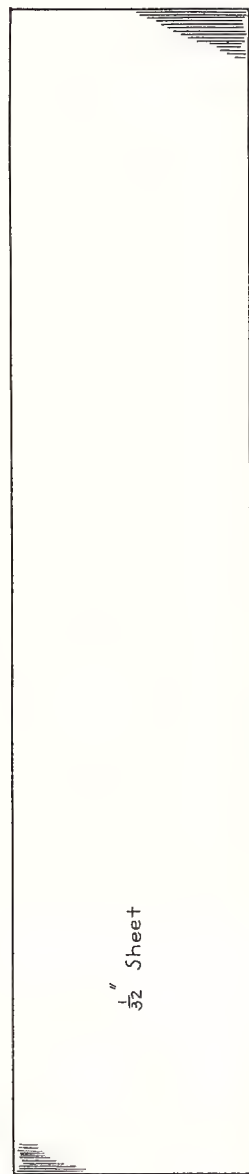
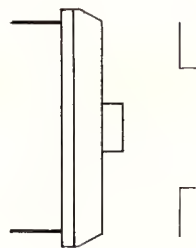
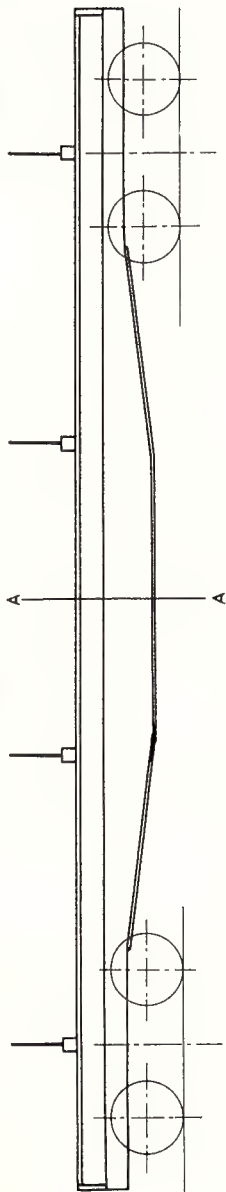
Other items spotted at the Dockyard whilst browsing—

BR prototype containers by Merit; Modern style street lamps, in sets of three, which really work. For the scratch builder of 3 feet gauge American prototype — Balboa lost wax castings — superb — and MEW link and pin sets.

Waltham Trading Coy., Elizabeth St., Melbourne, has many types of small panel mount switches. They have been used but are in good condition. Included are the simple on-off toggle switch, centre off, rotary, automatic off, telephone, banks of switches. From 35c to 85c. In the basement. If you are considering installing 'phones, they are selling cheaply here.

I was unable to get out to Mac Titcher's at Dandenong, but a phone call elicited the info. that Mac has a big range of 'N' gauge equipment — Egger Bahn, Minitrains, Peco. Also that stocks of Big Boy by Rivarossi in HO will arrive shortly.

Looking for suitable scenicking material? Titcher's has a range to suit the most fastidious. Also there are many rail films and recordings available from Mac. Ring any time and discuss your needs.



headstock 2 off
1/32 sheet.

1/32 sheet

1/4 square

1/8 sheet

1/32 Sheet

BBA Screw

section AA

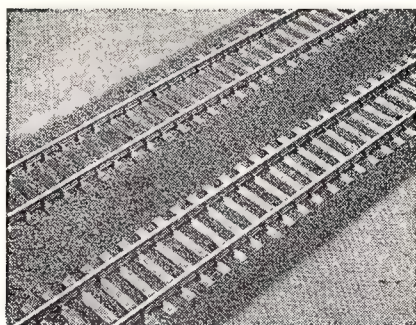
bolster 4 off 1/16 square

NSWGR MLE BOLSTER WAGON Full size. HO scale

J.A. Lyons. March 1967

PECO

The Greatest Name in Trackwork for HO/OO—N—Narrow Gauge.

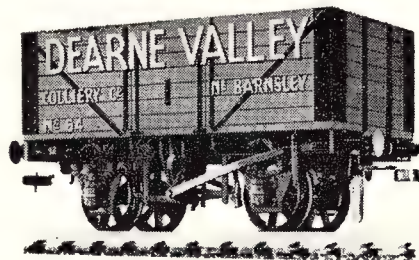


FULL RANGE OF WONDERFUL WAGON KITS NOW IN DEALERS' HANDS —

A complete new supply of these beautiful kits similar to the one illustrated have come to hand and are in your Regular Hobby Dealer's now, as follows:

R-62: Low sided Wagons, 3-plank, GW, LMS, NE, SR, BQC, Pwllheli Granite	Each \$1.88
R-70: Mineral Wagons, 5-plank, Tarmac, Dunsdon, Logan, Gresley, Garswood	\$1.98
R-54: Coal Wagons, 7-plank, Cliffe Hill, Jenkerson, Baddesley, Kingsbury, Ward, Dearne Valley	Each \$2.10
R-68: Lime Wagons with tops, Dowlow, Crawshay, South Wales	Each \$2.25
R-72: Box Cars, Izal, Colman's Mustard	Each \$2.45
R-64: Conflat (flat for putting containers on)	Each \$1.88
R-66 Kits for Containers, to fit Conflats, four types	Each 20 cents

Finally there was a price rise in "Stream-line" HO/OO Flexible Track No. SL-100X to \$1.10 per yard, but we have still absorbed part of the increase in England. So, someday . . . ! After the comparative drought in many Peco lines things came good when two in arrears, one current and one in advance consignments all arrived within a couple of days of each other. The price list No. 1/4 of March, 1967 for all PECO lines in stock, shows little change, except for Y Points, which rose to \$2.15, and SL-70 Point Motors now \$1.25. The range is now so complete and extensive that you need a full price list (catalogues not yet again in print) and you can pick this up at your dealers. Ask him, too, for a copy of "PECO in Australia", which will cost you two cents, but! PECO Trackwork is beautiful and has so many exclusive features. If ever in doubt, try one yard of track and a point, and you'll soon see why we say PECO is the greatest name in Trackwork. Also track (young brother track in size — equal in quality) for N Gauge straight and 9 mm Narrow Gauge.



ISN'T IT EXCITING?

I've been handling Model Railway Equipment for 17 years, but I can still get excited about some of the beautifully realistic quality lines which come to us from the 27 manufacturers covering 37 brands of model railway equipment which it is our pleasure to handle as distributors, representatives or agents. We take the lines that are right up to A1 100 per cent quality, and when we can't get such quality, we simply do not have the line. Most Australian Hobbyshops are out to do the best possible job of supplying your needs and satisfying them with high quality products. To make your hobby strong in Australia, give it a chance to grow by supporting the dealer who gives you the service you need.

PUBLICATIONS & NEWSLETTERS

On 2nd March of this year No. 1 issue of "Model Railway Newsletter" was in the hobby shops of Australia. Since then, our publication has been available almost weekly (for one cent), to try to keep abreast of the week to week happenings in the 37 brands which we distribute. You can ask every Thursday for one of our publications—there SHOULD BE a new one there (all being well). Not all hobby and toy shops have them, because they must be ordered from us before the shop gets supply. Postage is too high for single copies, so the best thing to do is call on your hobby shop regularly and ask. No. 10 is dated 4th May and is just going out (28/4/67). You should ask for "The Railway Modeller", England's leading model railway magazine, which is published monthly to be kept for you each month, as well.

OTHER LINES

TREES: Almost from poverty to riches! The only trees in stock a few months back were "Tannen". Those packets of five in kit form, where you get a lot of trees for small outlay, but all of the pine tree type, so today, we number our sizes and types of trees by the dozen. Ask for illustrated list.

N GAUGE: Arnold Rapido stocks are somewhere near full, and this range as famous in this gauge as Rivarossi is in HO, you will find has most of what you want and mechanically good too. Seven other brands support the Arnold Rapido with scenery items, structures, etc. Ask for full list.

HO — 9 or Narrow Gauge using 9 mm track: Ask us here for current price list. Egger-Bahn prices are different all over the place, so we only know ours. Gem Narrow Gauge lines for 12 mm gauge track are also included on the Narrow Gauge listing. There are many interesting lines.

SUBSCRIPTIONS TO MAGAZINES (Annual):

"The Railway Modeller" \$5.00
 "Australasian Model Railroad" Magazine \$1.80
"SENTINEL" PARTS: New packets issued of L-7B Cross Compound Compressors 30c; L-11C Dozen Handrail Staunchions 30c; CL-1 3-aspect Marker Lamps (pair) 25 cents. All other lines at this date at old prices — but hurry — they'll be up soon.

KEEP ABREAST OF CURRENT DEVELOPMENTS by picking up from your dealer every Thursday our latest publication. You'll help us to help you, if you do. There was a "Rivarossi News" dated 1st April. It was a nixy one!

ANYTHING ELSE: See you in the "Newsletter".

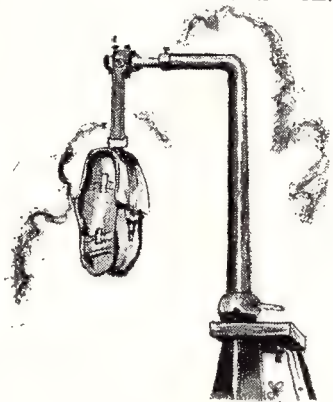
For trade supplies and modellers in difficulty —

AUSTRALIAN MODEL CRAFT CO.,

Box 118 P.O., Albury N.S.W.

Phone: Albury 21 2473 (9 a.m. to 6 p.m.)

MAIL BAG



Sir,
May I correct a small error in issue Number 25 referring to NSWGR 57 and 58 class locomotives?

The D57 class which was constructed in 1929 had a one piece cast steel bed frame incorporating the air reservoirs. The D58 class, which was built in 1950, also had a one piece cast steel bed frame.

Your readers may like to hear of other differences between these locomotives. The D57 had a three inch high valance along the edge of the running board, whilst in the D58 this was 12 inches high and became 18" high below the firebox. The D57 had its compressor on the running board until 1943.

The first locomotive had Gresley conjugated valve gear on the third cylinder which was uncovered whilst a steel casing covered a rack and pinion valve gear on the third cylinder in the 58.

The handrail on the 57 turned downwards at a right angle when it reached the smoke box front, whilst the later locomotive had a handrail which turned upwards at the smoke box to join with the handrail on the other side of the locomotive. The earlier locomotive carried Clyde builder's plates with a Morts Dock plate on the tender. The D58 carried Eveleigh builder's plates.

RODNEY TONKIN

Oatley, N.S.W.

Sir,

Please find enclosed cheque for one year's subscription to your excellent magazine. Please back date the subscription to the January/February 1967 issue.

I have not previously subscribed to the magazine, as I have always used the latest editions as an excuse for a visit to my favourite hobby shop. However, last August my firm transferred me from Sydney to Dubbo and since then I have found it increasingly difficult to maintain my supply in the old manner.

It is not until you actually live in the country, do you realise how good the city modeller has it. The time is past when in the middle of a modelling job you hop down to the local hobby shop to get that extra sheet of brick paper, length of balsa or bag of ballast. The current project now has to go on the shelf or back into its box and await that long time coming next trip to Sydney.

You are now no longer able to buy just what you need when you require it, nor are you able to spread the value of your purchases with a dollar spent last week and two dollars this week. When you do finally have that trip to Sydney your bank balance suffers a sudden large decrease for you have bought more than you really needed of everything you thought you would, could or might use in the coming months.

Shopping by mail is nearly impossible for not one hobby shop or model distributor is able to supply catalogues for the range of products he sells. The only way this can be done is to wait to see an advertisement in a local or overseas model magazine, and then write to the local suppliers of the product asking if they can supply it together with the price. Sometimes you actually do receive an answer.

The postman has now become the man to watch for, you now find the only way in which to keep up with what's going on in the world of model and full scale railroading, is to read every article in every issue of every publication you can lay your hands on.

Does somebody either make or supply sheets of scribed wood or plastic sheets of HO/OO galvanised iron roofing

material. I have found that at least 80 per cent of railway buildings are built entirely of it, and that the remainder are usually roofed with it. In the country the same proportions apply to factories, farm buildings and that, the greater majority of houses and shops are roofed with it. In the cities the proportions alter somewhat, but the majority of buildings use it in their construction somewhere.

The ideal size of the sheets for both economy and ease of working would need to be approximately 12 in. x 8 in. What do other readers think of the matter? If these sheets are presently unobtainable do you think it possible that a manufacturer could be induced to make them, if not, do other readers have some method of reproducing same.

If the magazine wishes, this letter or portions from it, may be used as you see fit, if you are unable to do this, would you please place the last paragraph in Mail Bag.

LES HARDAKER.

Dubbo, N.S.W.

Sir,

The H wagon of QGR featured in March/April issue was used during the drought last year for the transport of sheep, owing to the shortage of N-class sheep vans. A train of H wagons loaded with sheep was a most unusual sight.

In 1957, if I remember correctly, NSWGR U and K wagons were pressed into service for the transport of cattle from the Walgett and Pokataroo areas due to drought. Fans keen on prototype operation may get some ideas from this information.

J. McGREGOR.

Cheepie, Qld.

THE RUCKER REMOTE SWITCH ARM

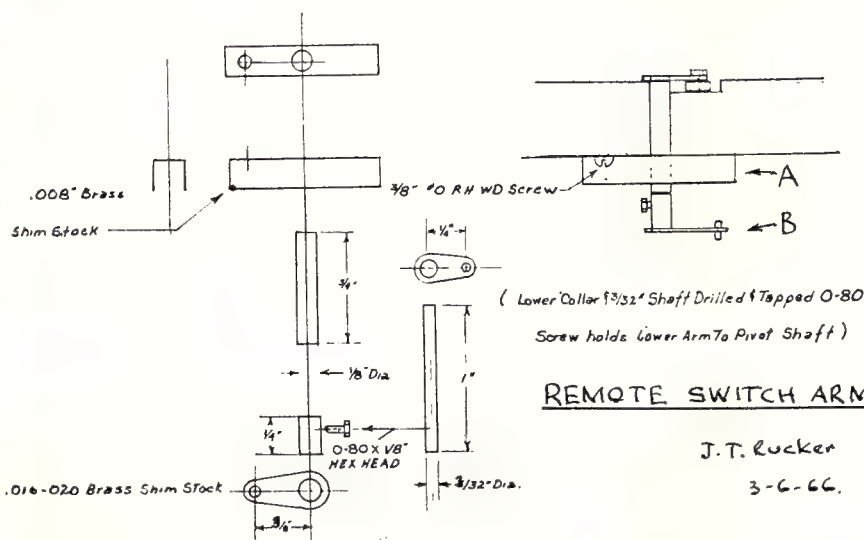
The enclosed drawing was forwarded to me by James T. Rucker, Bartlesville, Oklahoma. I have several in operation on my layout. They are connected to some scratchbuilt 2-coil machines, similar to Tenshodos, and are smooth and very positive in action. The design lends itself to modification quite readily. Details set out below can be identified by referring to drawing.

Modification A: Here I used flat 15 thou. brass instead of channel. As Jim said, you can't rip your hand that way.

Modification B: Instead of the collar and eccentric, I cut some of the eccentrics out of 1/8th brass, then drilled and tapped for No. 10BA. I found this more satisfactory than tapping the collar, due to the thin walled tube. No collar needed.

When mounting these arms, one must be absolutely sure that there is no binding whatever at the points. I have quite satisfactorily mounted one of these arms some 10 inches from the point motor. I use soft iron wire about 1/16 diameter (the sort that is used to bind newspapers), for the connection between motor and arm.

— C. F. HUGGARD.





CLUB CAR

S.C.M.R.A. ACTIVITIES

Central Division

The March meeting was held at Bob Gillie's home and members enjoyed watching a variety of "trains" representative of English, American and S.A.R. prototypes run round Bob's layout.

Much correspondence was read relating to the new constitution, a letter from N.S.W. member, Paul Rogers, and also a letter from new member, Robert Jones, 581 Blende Street, Broken Hill. Members extended a welcome to the new member and hope he will call to see us when he's in Adelaide.

The evening concluded with a delightful supper which, being all his own work, was a credit to Bob.

The April meeting at Peter Letheby's home was attended by 10 members and correspondence was read. Members were informed that the memorandum and/or constitution was virtually finalised. The request for a balance sheet of finances brought a laugh as we have never operated as anything, except a social evening and hence have no Division funds.

Members discussed the rather sad news that it is believed that S.A.R. steam locos will be retired progressively and that it is expected that "steam" as such will be gone from the rails by December, 1967. Not a very cheerful thought to all those who admire the steam locomotive. With the passing of "steam", members were reminded of the Australian Railways Historical Society's Museum site at Mile End, where a selection of locomotives will be on display.

It was suggested that any support which members could give to this project financially, or even physically, would be appreciated by the Museum committee.

After a very nice supper we saw one of Peter's latest films, which showed Victoria's Puffing Billy in action, as well as some of the abandoned right-of-way and timber trestles of the Victorian "Timber Railways". The film also showed some scenes along the Great Ocean Road. It seems to members after the earlier discussion that to ride behind "steam" we will eventually have to travel to Victoria.

Advance Notice of Meetings

June 14th: Mystery night.

July 12th: R. Kranz, 29 Tindall Road, Enfield Heights.

August 9th: N. Gully, 9 Lloyd Street, St. Mary's.

SUBSCRIPTION EXPIRED?

You will find that your expiry date is included with your name and address on the magazine envelope. Check now and renew in plenty of time.

OTHER CLUBS

CANBERRA MODEL RAILWAY CLUB. Secretary: F. Holloway, 58 Janz Crescent, Griffith, A.C.T.

The March meeting was held at the home of our secretary. Due to the short notice received, he was unable to follow our usual practice and organise some special item for this meeting.

A new design for the Club's letterhead was discussed as was an extension of our publicity activities. Both of these items were agreed to, pending further investigation.

Work is still progressing on the Club layout, but has now reached the stage where a lot of work produces little immediate result, although the overall results will be quite obvious in a few more weeks.

The April meeting was held at the home of Jack Richardson. A total of 13 members attended and the proposed publicity leaflet was discussed at length. The new letterhead was also discussed and it was decided that a competition be held for a design, all entries to be handed to the Publicity Officer at the next meeting, on 3rd May.

A letter from the newly formed A.C.T. Sub-Division of the Australian Railway Historical Society inviting members' participation in the formal inaugural ceremonies to be held on 6th and 7th May was read to the meeting and details of the special train to be run from Sydney to mark the occasion was explained to us.

The final payment was made on the building which houses our Club layout, and this milestone in our history was suitably recorded and acknowledged.

On Wednesday, 3rd May, ten of our members arrived at the home of Bruce Blok for our regular monthly meeting. After the business of the evening was concluded a general discussion on Riva-rossi locos and/or kits proceeded until Bruce began a session of slides and movies.

The slides, all photographed by Bruce at some time in his travels included shots of trains and railways of Australia, Italy, Austria, Sweden, Thailand, Malaya, and China.

The movies consisted of one made by Bruce showing Australian railways and one purchased from the U.S.A. dealing with the Santa Fe Railroad.

The Club was well represented on the A.R.H.S. special train from Goulburn which marked the formal inauguration of the A.C.T. Sub-Division of the Society on Saturday, 6th May, and three of our members have the honour of serving on the A.R.H.S. committee in Canberra.

A reminder is issued to all members that our annual general meeting is to be held on Wednesday, 5th July, at a venue yet to be announced.

Work nights are, as usual the 2nd and 4th Tuesdays in the month and scenic work on the layout is progressing, still under the general guidance of Bruce Blok.

Meetings are held on the first Wednesday of each month and prospective members and visitors are always welcome. If you are visiting the National Capital at any time, might we suggest that you phone Fred Holloway (work, 40411, ext. 393 or home, 91807) or Ted O'Halloran (home, 811774) so that we can arrange to meet you and to show you something of our activities.

GEELONG RAILWAY MODELLERS, Hon. Sec.: J. Macdonald, 15 Arkana Ave., Highton, Geelong, Victoria.

Here after a long absence is a report from Geelong. The latest effort has been a portable layout which was knocked together in the space of little over a fortnight. To this was added another very well constructed portable layout belonging to Michael Killingsworth.

Actually Michael's section carried the show, it was a complete station and small town with a great deal of extremely well thought out accessories. In no way was it cluttered, but whatever should have been there was there.

The reason for the portable layouts was a hobby show held by a local Scout group. The main attraction was a free ride behind a live steamer on a track organised by the 'Surrey Hills Live Steam Association'. However, we received a great deal of attention as well.

The next meeting will indicate whether or not any serious modellers will be forthcoming as a result.

At the moment this is about all the news. Next Friday could be interesting as it is the first meeting for two months. The last due date was Good Friday.

THE BUSH TRAMWAY CLUB, C/o Bob Mann, 5 Owens Rd., Epsom, S.E.3., Auckland, New Zealand.

Considerable progress has been made in restoring railway exhibits at the Museum of Transport & Technology, at Western Springs.

Club members recently put the Museum's Kerr Stewart Loco back in running order and over Easter this engine and the Heisler (ex-Ongarue) were both in steam together.

Running was restricted to a few yards on a storage track but present plans for an improved running track, with sidings and workshop, will give greater scope to our activities.

The Kerr Stewart is a side tank, 0-6-0, about 12 tons, built in 1926 and has outside Walschaerts motion.

Another recently completed job has been the dismantling and rebuilding of Orenstein & Koppel 7-ton 0-4-0. Many parts including cab, bunkers, sandbox and smoke box door, were replaced with new material. (King size modelling?). It is not proposed to steam this engine which we think was built around 1890, but it is certainly a most picturesque and interesting exhibit.

Persons interested in supporting our preservation programme with its accent on steam in running order, may wish to join the "BUSH TRAMWAY CLUB". Annual membership is 30/- (or \$3.00 after July 10, 1967). Payable to the BUSH TRAMWAY CLUB, C/- 5 Owens Road, Auckland 3, N.Z.

MELBOURNE MODEL RAILWAY SOCIETY. Secretary: E. Frost, P.O. Box 68, Boronia, Victoria.

The layout is progressing very well now, and we have both Beach Rim and Creswick stations fully operating. By the time the readers see these notes Dundundra will also be completely operative. A fourth station will be completed by December 1st.

Membership now stands at 70, and as a planned layout operating session will occupy approximately 30 members when the layout is finished, and we intend to operate on three evenings per week, there are still a few vacancies. (Contact the secretary or call at clubrooms any Friday evening).

CLUB CAR (Cont.)

We attended our first public exhibition on Saturday and Sunday, April 8th and 9th, at the Glen Waverley Hobbies Exhibition — about 3500 more people now know we exist — and we were very pleased with the result. We had a 6 ft. by 6 ft. operating two rail HO layout, a 7 ft. x 3 ft. Marklin layout, and a static display of our own, as well as looking after a 10 ft. x 4 ft. HO two-rail layout for the organisers of the exhibition. We offer our thanks to all members who helped on this effort (16 members turned up on roster, and about 10 others helped in preparing the exhibits). Our particular thanks go to members Vince Strangio, Ken Carling and Keith Roberts — three well known names in the hobby in Melbourne — for their efforts in making this a success.

This exhibition was our first, but will not be our last.



The Bush Tramway Club's locos on display at Easter. L. to R. The Heisler, the Kerr Stewart, and the N.Z.R. F class. (Photo R. Mann)

UPPER BURNETT MODEL RAILWAY CLUB.
Secretary: Clive F. Morgenstern, 2 Faraday St., Monto, Queensland.

Some months ago our members decided that the time had come to name our stations. Among the many suggestions was Edomclaway. Since we didn't have a station name-board long enough we had to forget that one; but we did eventually get the stations named.

Until very recently we have been operating trains rather haphazardly with no organized time table. Some weeks ago we drew up a time table and are proud to say we didn't have one late train due, no doubt, to the fact that shunting time allowed was too liberal. At the time we were operating on a Manual Block system using simple "on-off" switches. This proved very unsatisfactory, so we decided to

change to "Cab" control and the advantages of this system are already evident despite the fact that, as yet, we have not attempted to use a time table and have only installed the new system between Upburn (the main terminal) and Upburn East via Tunnel and Oyster Hill. Now a new, more streamlined time table is being drawn up which may result in fewer trains being "on time", just as happens on the prototype.

In addition to installing "cab control", work is proceeding on electrification of points (the more distant ones first) and also on the Trestle Bay wharf area. In keeping with the modern trend in railways, "container traffic" will be in operation from ship to rail. A lot of work will have to be done before this becomes a reality, however.

An "Open House and Film Evening" are planned for May and it is hoped that we can have the club layout, the Oyster Hill and Eastern, ready in time to put on a really good show and thus add to our membership.

larged and improved layout under the capable hands of Harry Gibson and the A.M.R.A. portable layout was well filled with appropriate trains made up of Central Coast club members' trains and some of its own members.

Thanks go once again for John McDicken for transporting the layout both ways. Harold Warren came along to see how the layout was working, which was first-class, thanks to the work he and his colleagues put into the wiring and control system of this large portable layout.

The Central Coast staged their old layout for the last time and Len Dodds had his U-drive operational once more for the youngsters to get the feel of the throttle.

Probably one of the most interesting aspects of the exhibits was the display put on by a father and son team, Lionel Wallace and his son Geoff.

They assembled a complete 6 ft. x 4 ft. layout with two turn outs and a loop of Peco track and spent the best part of their time answering many questions on track laying, running and maintenance of rolling-stock and locos, besides questions on the functions of the club and the members' activities. There were several scratch models on display also showing how different methods of construction achieve the finished product.

The sustained interest shown by the public in Railway Modelling is evident in the excellent attendances shown at the Blue Mountains exhibition, the Town Hall exhibition by A.M.R.A. and all clubs concerned and the Central Coast exhibition.

This should be a good omen both to those in the hobby and the manufacturer of model railway equipment.

In domestic affairs the members of the Central Coast Club are head down and tail up with their construction of the Hawkesbury River project.

Committeemen Kevin Ryan and Graham Williams have been busy sketching and photographing the Hawkesbury River Station and its environment.

AUSTRALIAN MODEL RAILWAY ASSN. Fed.
Secretary: C. C. Rolfe, Jeetho, South Gippsland, Victoria.

A.M.R.A. is an Association formed and controlled by amateur railway enthusiasts and its aims and objects are to foster interest in railway modelling and to assist and advise all those interested in the hobby provided they are members of the Association.

On joining, members receive a copy of the Constitution and Articles of the Association for information and guidance, a copy of the Association Model Railway Standards and a copy of Beginners Guide to Railway Modelling in Australia, by Allen Dowel.

There are branches in Brisbane, Sydney, Melbourne, La Trobe Valley and South Gippsland and many sub-branches around these areas. There are many members in Western Australia, Tasmania, South Australia and overseas who keep in contact with the Association by mail. A copy of the Association's magazine, *AMRA Journal*, which is offset printed, is well set-up, profusely illustrated and covers all aspects of the hobby, is posted to association members only, six times yearly.

Further enquiries to The Federal Secretary.

CENTRAL COAST MODEL RAILWAY CLUB.
Hon. Secretary: Leonard H. Dodds, Carlton Road, Holgate, via Gosford, N.S.W.

Report on the Central Coast Second Annual Model Railway Exhibition, which was held on Australia Day weekend for two days and two nights.

Members of the committee which organised this year's exhibition were very pleased with the result, both in terms of displays presented and in the overall response by the public.

Altogether, there were six layouts working and two exhibits of books, literature, movies and static models by the A.R.H.S. and the R.T.M. Geoff Lillicoe manned the historical stand and with his capable assistants looked after the many inquiries on the railways and their background.

The N.M.R.A. Eastern Division besides staging layout, of course propagated the faith with our national model magazine.

The Umina club showed a greatly en-



NOTES OF THE SYDNEY MODEL RAILWAY SOCIETY GENERAL NEWS

Once again notice is hereby given that your subscription is now due. Fees being: \$4 city members; \$1.60 country members. If any member is not receiving his copy of Yardmaster, please inform your Secretary by giving your address. List of members' names and addresses are placed on notice board for any change of address that may have been made over the last year. Notice is also given that the annual general meeting will be held in June or July and notice will be posted on notice board of the date when it is known. It should also be pointed out that on this night it is for members only.

It has been noticed that since resuming this year that not so many of the older hands are present. Your reporter of "O" Gauge himself has had eight weeks out of the first 12 weeks on leave, but looking at the attendance book there have not been so many turning up. What is the reason?

New Members: John Huxtable, of Kirribilli, "HO" and Michael Rowe, of Waitara, "HO". Welcome to these two new members.

"O" GAUGE NEWS

Still not a great deal happening here. Don Stone works out the roster each night and timetable running is picked up from the week before. This way the timetable is worked fully from start to finish. John Bowen has been on holidays to Melbourne and is believed to have come back with a "Max Gray" GP35 diesel. Shouldn't be too long before we see it running. On the sick list, Norm Read was off but is now back again. We miss you Norm.

It was with regret that the President, Paul Simpson, had to announce in mid-March the passing of Bob Stone, "O" gauge. To those who knew Bob, he was not in the best of health and so passed away suddenly on a Sunday morning. Bob left his mark in "O" gauge in two cars, which are not often seen in model form. They were the HCX branch line car and the DCC Dental Clinic Car. More of his work was seen at the Labour Day Shows at the Town Hall with his "O" gauge platform and station buildings, together with the eye catcher circus train of some 10 or 12 cars. We will miss Bob. A card was sent to Mrs. Stone by Paul expressing the feeling of the members.

Tony Wyeth's 46 Class Loco is coming along fine. When complete it will mean that we will have four 46's on the loco stud. Sid Lothian had his 17 Class in for its last trial run before (HO Gauge News) going into paint shop. A very nice looking loco, Sid.

HO ACTIVITIES

February 13: Good to be back with my fellow members again to talk about our main interest, railway modelling. First night back is always clean-up night and as Barry Millner brought in his vacuum

cleaner, this made short work of the dust on the layout. Bob Moffat did a good job cleaning the track. The latter brought his latest rollingstock addition, an Athearn Budd car. This will be a great help with our timetable rollingstock roster.

February 20: We all had fun operating the layout again after the Christmas break. Nice to see Bill Galloway again after a long absence, also to see his son, Lee, who had been in South Australia for a year. Amongst the visitors was a gentleman who is interested in TT scale and our eyes were opened when he showed us a few models of NSWGR prototypes which were admired by all present. Arthur Wheatley was discussing bogie production by the silicon rubber method with one of the visitors.

Arthur has been very busy over the holiday recess using this method. Arthur also showed his latest efforts in converting Tri-ang continental corrugated roof and side plastic passenger cars to NSWGR prototype. He cut out the window strip and using white styrene sheet of the right thickness and size, he shaped out the windows of the Southern Aurora cars and glued the strips into the Tri-ang body sides. This produced excellent replicas of the stainless steel cars. Arthur has now a set of 10 cars, each varying as do the different cars in the Southern Aurora.

February 27: Lee and Bill Galloway came in with a case full of locos and rollingstock. We were very impressed with the 2-6-6-2 painted with silver smoke box, Green boiler can and tender and red cab roof. We all enjoyed driving and controlling these locomotives of Bill and Lee. Max Burke and John Wheeler placed in position at Glenvale a three-storey warehouse with a goods platform. This will give the Glenvale operator a place to spot some cars. Max is to be thanked for a good job.

John Carter showed a glass fronted box which will be fixed at each operating position. It contains two rollers upon which the timetable programme is affixed. Turning of the rollers will rotate the programme as time progresses.

March 6: There was a good roll-up of members. John Wheeler was in control at Central. Barry Millner was at Central Goods making up plenty of short goods trains for the Plateau and The Valley. Arthur Wheatley was on duty at the Junction but will have to take a course in safe working because of a beaut smash on the up main. This brought us all to our feet to view the wreckage. Dennis Sherring was at the back of the Junction Control Board tidying up the wiring. Ken Smith at Wits End being his usual calm self with everything running smoothly, whilst Frank Shennen handled things at Glenvale like a veteran.

Lionel Glendenning was in The Valley watching it all. This is an excellent position to set the whole of the layout in action. Max Burke at the Plateau was busy talking to our new member, John Huxtable, who is mainly interested in TT and we hope that the latter will have a lot of happiness in helping us to operate the HO layout.

A good evening's operation was enjoyed by everyone present.

March 13: Dennis Sherring again spent the evening fixing the wiring on the Junction Control Board and members are very grateful to Dennis for carrying out this task, which will give the Junction signalman a big job controlling trains to all points on the layout.

March 20: Arthur Wheatley was busy installing points at Glenvale's new sidings,

which are a great help in stabling passenger rollingstock. Frank Maxwell and Len Jansen dropped in. The latter is full of enthusiasm for the Thyristor train control, having made one up and discovered his locos perform a lot better under its control. He is going to make another with a brake for main line running.

March 27: Frank Shennen was at Central. Our newest member, Michael Rowe, at Central Loco. We give him a hearty welcome and are happy to have him with us. Max Burke was at Central Goods. It was nice to see Dennis Sherring in control of his new Junction Board instead of being under the baseboard. Len Jansen operated Wits End, whilst Bobby Millner was doing a fine job at Glenvale. John Huxtable has settled in very well and was the Valley Station Master. Bob Moffat has moved to Glenbrook and now being a country member, advised us that he would not be able to come to meetings so often, but we will be glad to see him any time.

March 17: Arthur Wheatley keeps on coming up with something good to look at. This time it was an NSWGR bogie cattle truck. Arthur made up the sides, ends, roof, and floor patterns and from these he made the rubber moulds. His idea of making the floor, sill and body bolster all in one casting was liked. For weight, he used lead shot imbedded in the sill. A very fine job.

Dennis Sherring had his brother in to give him a hand with Junction Board, which is nearly finished. Convey our thanks to your brother, Dennis. The layout operated with no troubles and everyone enjoyed themselves.

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ONE ONLY C38 loco and tender. Had very little use. Valve gear needs attention. New price \$53.50. Reasonable offer accepted. L. F. Johnson, 7 Plummer Court, Somerset, Tasmania.

MODEL steam locomotive Blue Prints, also castings. All gauges. Outline Blue Prints, 7mm scale. Bolton, 70-72 King St. (4th floor), Sydney. Catalogue: 80 cents.

TRI-ANG OO/HO Britannia loco with tender and smoke, 4 Tri-ang pullman coaches near new. \$15.00. Can be seen residence R. Thomas, 61 Hewitt Ave., Wahroonga, N.S.W. Phone: 48 4268.

12 words for 30c. Extra words 2c ea. Name and address free. Cash with copy. No charge to N.M.R.A. members. Closing date: 15th of preceding month (e.g. 15th July for August issue).

LIONEL 'O' Gauge trains for sale. Consists of one 4-6-4 Loco, blows smoke and illuminated. One SW 7 Diesel switcher. 3 passenger and 1 baggage coach, aluminium and fluted sides, also illuminated, 9 freight cars and 1 illuminated caboose. Approx. 70 ft. Gargraves flex track and 5 turnouts with Tenshodo switch motors. Lionel ZW275 watt transformer, Ferguson 300 watt 240-110V transformer. Price required is \$240 or nearest offer. K. C. Brown, 21 Hunter St., Lewisham, Sydney, 56 3876.

WANTED

PHOTOS, slides of S.A. Rlys. RB, RBP and RX wood sheathed reefers. Also Commonwealth Rlys. R and V class outside braced box cars photos. C. Huggard, 65 Farview St., Glenroy, W.9., Victoria.

HORNBY Dublo 2-8-0 loco and tender, 2-rail. Would consider 3-rail if priced right. J. McGregor, Beechal Station, Cheepie, Queensland.

RAILWAY Modeller, October, 1966 and January, 1967. Tri-ang Railways 10 Year Book, good condition, pay new price. R. S. Sidebottom, 31 Vaughan St., Shepparton, Victoria.

BUILDER'S Plate from NSWGR Garratt when one becomes available. Edwin O. Tefs, 1711 Baird Ave., Portsmouth, Ohio, U.S.A.

QR CLASS "H" OPEN GOODS WAGON

The plan for this vehicle appeared in the last issue. A photograph unavailable at the time is now presented for readers. Details not shown on the plan can be observed.

(Photo by courtesy Queensland Railways)



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OUR PLAN



EARLY VICTORIAN RAILWAYS PASSENGER CARS

Between 1897 and 1903, the Victorian Railways built large numbers of passenger cars using a common underframe and dimensions.

The First and Second class compartment cars are shown in the plan opposite.

In addition, composite cars were built. These had three First class and four Second class compartments and amounted to joining part of each of the respective cars in these proportions.

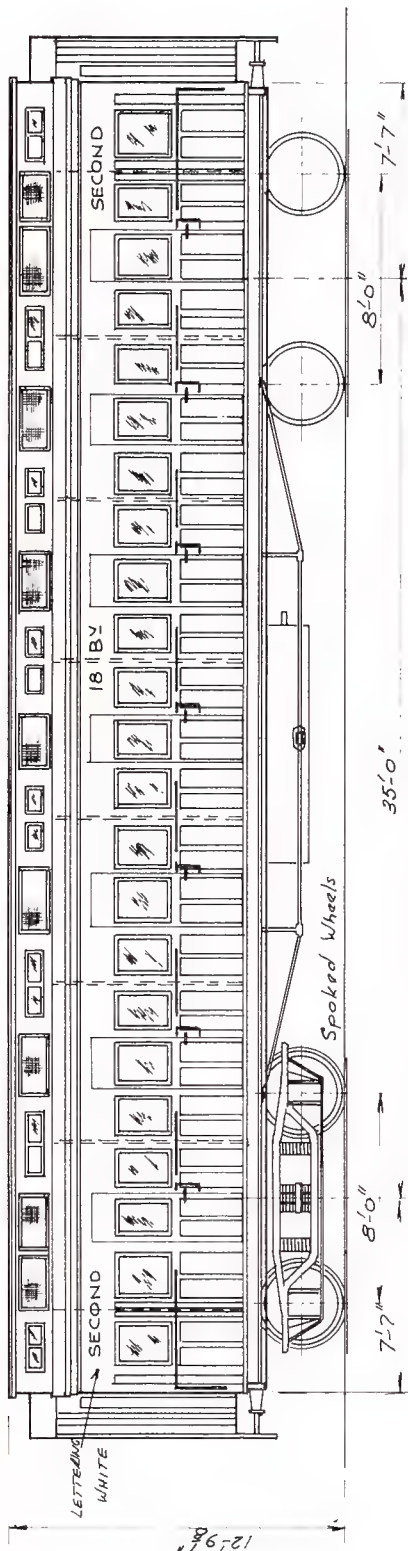
However, the endmost door of the Second class section was moved along one window towards the end to give access to a small saloon. There were no end gangways; the code was ABL and numbers were 1 to 50.

Two other First class cars were built which incorporated large saloons in place of the two outermost compartments at each end of the standard compartment car.

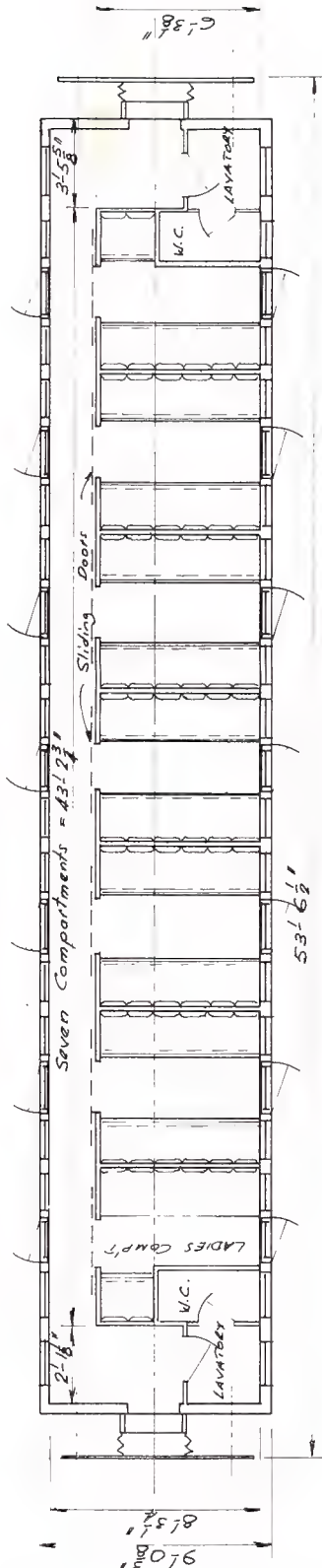
The second compartment door from each

end was eliminated and double width windows provided inwards from the remaining door. The two centre compartments remained unchanged; their code was AV and numbers 21 and 33.

(Original plan and photo V.R. Other information Jim Blaney, and Russ Siddall. Plan by Norm Coughlan.)

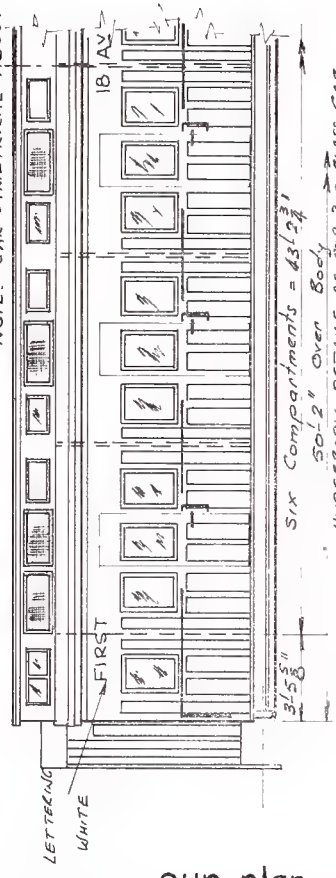


SIDE ELEVATION - 2ND CLASS CAR

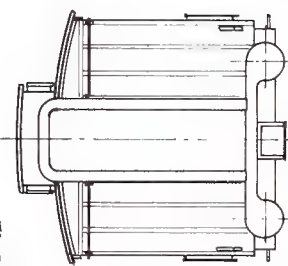


FLOOR PLAN - 2ND CLASS CAR

NOTE:- CAR SYMMETRICAL ABOUT CENTRELINE



SIDE ELEVATION - 1ST CLASS CAR



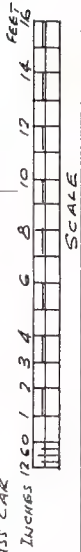
END ELEVATION

NOTES
 COLOURS:- BODY SIDES INDIAN RED
 ROOF:- LIGHT STONE
 U/F FRAME & BOGIES:- BLACK
 HANDRAILS:- BLACK
 NUMBERS 1ST CLASS:- 1 to 22, 24, 31, 33, 35
 2ND CLASS 1 to 25

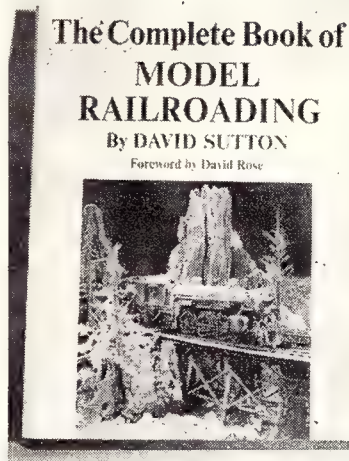
VICTORIAN RAILWAYS
 5'-3" GAUGE

FIRST CLASS CAR CODE 'AV'
 SECOND CLASS CAR CODE 'BY'

DESIGN	U.C.	S.C.R. PUBLICATIONS
DATE	APRIL '67	PLAN & PRINT SERVICE



our plan



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Rolling stock and the great variety of cars which can be put into use in your model empire are discussed in a wealth of detail. Basic wiring techniques are thoroughly illustrated to help you eliminate unnecessary complication and avoid a tangle of wires beneath your layout. The author also describes the great pleasure and advantage in running trains in prototype fashion.

What's more, the author has "deliberately included the names of manufacturers and/or sources of supply, and in some cases has listed parts' numbers and catalogue references for the express purpose of making it easier for you, the reader, to be able to track down a particular item or piece of equipment which either strikes your fancy or is important to your model railroading operation. While this may possibly appear commercial in one respect or another, you will find it a definite aid when you visit a hobby shop and attempt to describe a particular item you wish to purchase."

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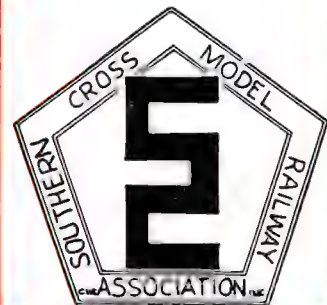
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Vol. 3, No. 27

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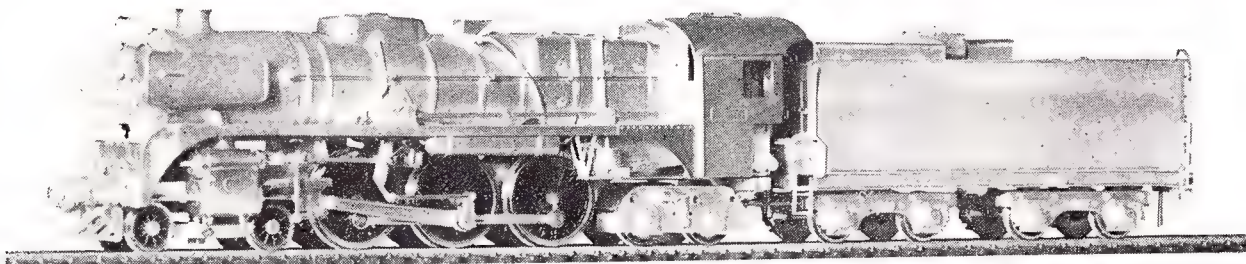
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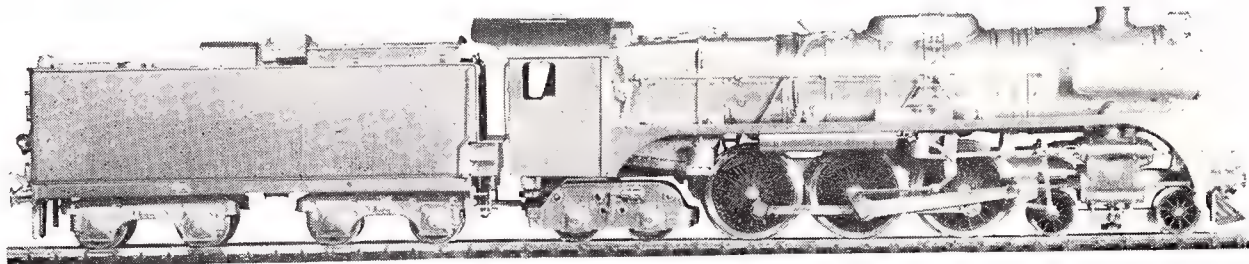
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Other News from "THE DOCKYARD"...

We are pleased to be able to announce that 'Dockyard' have now taken over the tooling of the former B.P.R. line. As older railway modellers are aware, B.P.R. Castings turned out some of the finest HO and O gauge loco. and rolling stock items yet offered. Production was discontinued some years ago, but as a result of this take-over, it is hoped to have the first re-runs completed and back in stock shortly. Progressive re-introduction of all other lines will follow...

Northwest Short Line have just delivered limited stocks of the magnificent new Milwaukee Road 'S-2' 4-8-4 Loco. and Tender at \$105.00. Detailing even includes a working front drop coupler!...

New Rokal stocks enable us to present the full range of the finest in TT. Catalogue, with price list, is available at 35c. Amongst other new developments, 1967 will see the introduction of catenary towers and cross spans, to cater for multiple track, overhead electrification.

Talking of TT, although the current Tri-ang TT range is somewhat reduced, a further shipment, along with OO lines, brings our stock to full strength for the current year. Catalogue, with price list, 12c, plus postage...

Many years ago CCW, of England, produced a limited run of N.S.W.G.R. Newcastle Express' wood Coach Body kits, in both HO and O gauge. B.P.R. held a few in their store and as a result of our take-over, these kits passed to us. All those in HO have now gone, but we have 15 O gauge kits left — going at \$3.00 each while they last!...

New deliveries in HO from Katsumi include Balboa's magnificent 'MT-3' and 'MT-4' 4-8-2's, both of which are also now available in O gauge. Due before this appears in print, also in the Balboa line, are the S.F. '9000' 0-6-0 Switcher at \$75.00, Class 'A' Shay at \$76.50 and Model Engineering Works' C.M. 0-6-0 Switcher at \$60.00.

In HO gauge, the 'A' Class Shay at \$77.70 and Nevada County No. 9 2-8-0 at \$58.00...

New O gauge products outshopped by Katsumi include a Tripple Hopper with pressed panelled sides and flat ends at \$20.95, a 48' Mill Gondola at \$13.30 and a 52' Mill Gondola at \$14.00. All less trucks... 'United' have now supplied the new Milwaukee Road Hudson at \$78.50 and more S.F. 2-8-0 at \$59.25. From the branch 'Fujiyama' shop, comes

the S.P.-T. & N.O. 2-6-0 at \$52.30 and in HO gauge, the Sumpter Valley Caboose, complete with trucks at \$13.95...

Hornby Dublo 4-6-0 'Cardiff Castle' and 2-8-0 '8F' Consolidation are due before this appears in print. Stocks are limited and coming from a special re-run, making use of the old Dublo tooling...

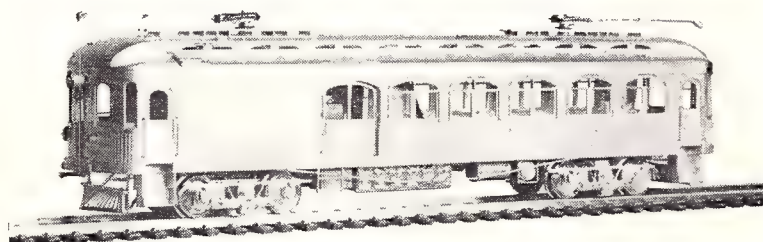
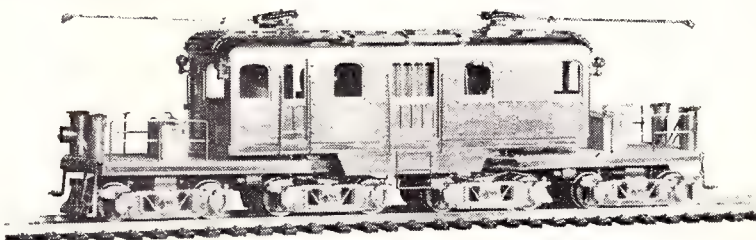
Kumata have now delivered the long awaited HO gauge Baldwin 0-4-2T at \$16.95, together with diminutive matching 2-wheel Passenger and Freight Cars at \$2.60 each! Also in from Kumata is the Alco 'DL-640' 2250 H.P. Diesel-electric Locomotive at \$47.25, C. & N.W. 0-6-0 Switcher at \$48.00 C. & N.W. Caboose with trucks at \$13.70 and the 'PT' Class 14-wheel 'Centipede' Tender at \$22.30 each. To come soon are the HO gauge Brill-Mack Rail Motor at \$18.90 and the massive, twin motored G.E. 'U-50' Diesel Locomotive at \$70.00 each...

Before 'pulling the pole from the wire' for this trip — a reminder that our new, June, 1967, OO/HO Price List is now available at 25c, plus postage. Comprising 20 pages, this List covers all the many thousands of items of loco., car and wayside hardware which are carried in regular stock.

FOR HO 'TRACTION FANS — A GROWING RANGE OF ELECTRIC CARS & LOCO'S . . .

I.T.S. CLASS 'C' ELECTRIC LOCO:

Amongst the most famous of the larger interurban electric locomotives was the I.T.S. Class 'C' 'Motor'. Of double articulated design, like the prototype, the model comes powered on all axles and is finished with full external detail. Unpainted, ready-to-run. Length overall, 74". Weight, 21 oz. Price: **\$39.00.**



S.N. No. 126 NILES COMBINE: Faithfully reproducing the classic art of Niles wooden construction, this Car comes with interesting 5-window front ends and is a true masterpiece in brass. Unpainted, ready-to-run. Length overall, 74". Weight, 10 oz. Price: **\$32.50.**

OTHER RECENT ARRIVALS

S.N. No. 125 3-Window Niles Wood Combine.	\$32.50
S.N. No. 200 Niles 57' Wood Coach.	32.50
S.N. No. 220 Niles 57' Wood Trailer Coach.	25.90

ALSO IN STOCK

C. & L. E. Freight Motor Car.	\$31.95	P.E. 5050 Series 'Hollywood' Car (Modernised).	26.55
Max. Traction Truck Saloon Car.	26.50	P.E. 600 Series 'Hollywood' Car (Original Type).	\$26.55
Toronto Double Truck Peter Witt Car.	25.50	Indiana RR. R.P.O. Car.	26.00
New Orleans 800 Series Car.	21.95	O.E. Niles No. 58 Combine Car.	31.00
St. Louis Palace Car.	25.00	O.E. Niles No. 64 57' Combine Car.	31.00
Single Truck Freight Car.	11.25	O.E. Niles No. 900 57' Box Motor.	31.00
Single Truck Birney Safety Car.	11.95	O.E. Niles Observation Car.	32.00
Brill Single Truck Sprinkler Car.	17.95	C. M. & B. Interurban Car.	27.00
North Shore 4-Car 'Electroliner'.	67.95	W. B. & A. 62' Niles Coach.	31.00
P.E. 800 Class Car.	33.50	Spokane Box Cab Loco.	17.50
P.E. 400 Class 71 ft. Coach.	35.50	Butte, Anaconda & Pacific Box Cab Loco.	20.00
P.E. 498 Class 67 ft. Combine.	35.50	I.T.S. Class 'B' Electric Loco.	28.70
P.E. 1451 Class Wood Box Motor	29.35		
P.E. 1446 Baggage/Express Car.	21.55		

COMING SOON

S.N. No. 1005 Combine Car (M.E.W.)	\$?
S.N. Parlor Trailer Car "Bidwell".	28.85
P.E. Tower Car (No. 00150 Wire Greaser)	33.95
P.E. Steeple Cab Electric Loco.	30.50
P.E. No. 1299 Class Business Car.	?

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REWARD

yourself with a fascinating weekend by planning to attend the 1968 Easter Convention to be held in Sydney.

The members of the Eastern Division are now preparing a wonderful three days for you. There will be layout visits — clinics — model contests — performance contests — photographic contests — a special steam hauled trip to Loftus to see the South Pacific Electric Traction Museum with its old Sydney Trams. Later the train will return through parts of the metropolitan lines where steam is seldom seen.

More details of this convention will be released later in the year as soon as the programme has been finalised. Cost will be kept to a minimum. First class accommodation will be arranged. Billeting with other members of SCMRA will also be available.

Meantime keep the Easter weekend free.

THE STOKER

The monthly N.Z. model railway magazine that covers all prototypes and scales with a bias towards N.Z. prototypes and Sn3½ scale (3/16" to the foot). Available in New Zealand from all hobby stores and booksellers and in Australia from some hobby stores. Also direct from the publishers on a subscription basis. Individual copies 1/6 (N.Z.), 30c (Aust.), Subscriptions, N.Z. 15/- p.a., Australia \$2.20 p.a., elsewhere 17/6 (N.Z.) p.a.

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THE AUSTRALASIAN MODEL RAILROAD MAGAZINE

Vol. 3, No. 27, JULY/AUGUST, 1967

AUSTRALIA'S LEADING MODEL RAILWAY MAGAZINE

THE OFFICIAL JOURNAL OF NMRA IN AUSTRALASIA
Incorporating THE YARDMASTER, The Bulletin of the Sydney Model
Railway Society.

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15th AUGUST

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Application for new membership should be
sent to the Secretary, SCMRA, 61 Hewitt
Ave., Wahroonga, N.S.W., 2076, together
with a remittance of \$9.50. Send \$5.00 if
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For convenience renewals may be sent di-
rect to Membership Chairman, SCMRA, 47
Leighton St., Rooty Hill, N.S.W., 2766,
together with a remittance of \$7.50.

Please do not use the word "Treasurer"
on your envelope as remittances have been
lost.

If convenient moneys may be paid into
any branch of the Bank of NSW and re-
mitted to Penrith, N.S.W. in favour of the
Savings Bank A/C of the "Southern Cross
Model Railway Association", and the deposit
slip sent with the application form or re-
newal as applicable.

G. Gordon,
Membership Chairman

On the Cover...

Beautiful is the only word to des-
cribe this model shay in 4mm
scale which has been built entirely
from scratch by Don Turnbull of
Lidcombe, N.S.W. More photo-
graphs appear on Page 19.

ECONOMICAL POWER SUPPLY USING TRANSISTOR CONTROL

By **TERENCE N. CARPENTER**

Whilst this control unit does not provide all the refinements of more complex costly units, it offers a remarkable amount of speed control for both large and small loads. Since there is a minimum of components in this unit, you won't have to be an electronics expert to build it, although I must stress most emphatically, that, as this unit is connected directly to the 240 volts supply, there are certain requirements that must be complied with in the construction and wiring to ensure maximum safety to the operator.

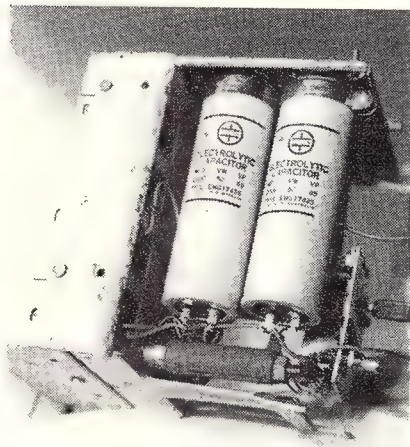
CAUTION: 240 VOLTS

The transformer used (ST3523, from Special Transformers Pty. Ltd.) is fitted with a shield winding between the primary and the secondary windings. This shield **MUST** be connected to the mains earth. Also, if the unit is enclosed in a metal case, this must also be effectively earthed. Regardless of the type of casing used — plastic, metal, wood, etc., the unit must be completely enclosed and sealed in such a manner that either a spanner or screwdriver is required to gain access to the main fuse and switch (if fitted) and transformer. If you have any doubt about what you are doing with the mains side of this project, consult a licensed electrician or local electricity authority.

HEAT SINK ASSEMBLY

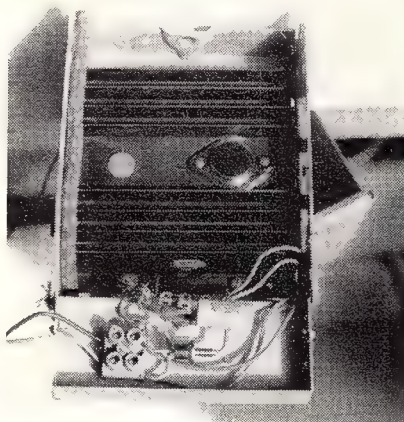
To ensure maximum heat dissipation from the rectifying diode and transistor, and consequently long life from the unit, the correct heat sink material must be used. Take special care to insulate all three (3) connections of the transistor, i.e. the case of the transistor as well as the emitter and

The capacitors are mounted.



base connections, from the heat sink. This is necessary because the case of the rectifying diode is at a different potential to the case of the transistor. The rectifying diode is a press fit into the heat sink so consequently must be a snug fit. This is to ensure a good electrical connection as well as a good physical contact for heat transference. Since the heat sink is part of the circuit, you must have a good electrical connection to it. I suggest that you clean the "blueing" from a small area along an outside edge of the heat sink and fit a star washer along with an eyelet or terminal under a suitable screw and nut. Before we leave the heat sink, remember that if you use a metal chassis or case, ensure that the heat sink is electrically insulated from it.

The heat sink is important.



DIODES AND TRANSISTOR

The wire connection of the rectifying diode is positive, and the case is negative. It is absolutely essential to connect the positive of the diode to the transformer, and negative (connection from heat sink) to C1 and R1. The case of the transistor is the collector (c) and refer to the diagram for the identification of the emitter (e) and base (b) connections.

The other diode connected across the output (OA210) acts as a spark quench in conjunction with the 0.1 uf capacitor (C3) for any transient voltages produced in the motor. To those of you who understand these circuits, yes, it is connected in the reverse direction, otherwise it would be a permanent low resistance load on the output. This diode usually has a symbol printed on the case, and should be connected

with the case to positive, and the wire connection to negative.

PROTECTIVE RESISTOR

Resistor R1 (6.8 ohms) acts as a protective device by limiting current through the transistor should the output be accidentally short circuited.

ELECTROLYTIC CAPACITORS

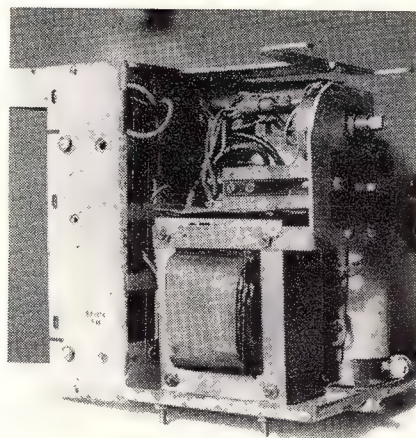
The positive connection of the 2000 uf electrolytics can be identified by the red marking, and this must be connected to the correct polarity (positive).

PROTOTYPE TEST UNIT

The output from this unit is D.C. (smoothed), and the voltage varies from 0 volts to 24 volts, at up to 2 amps. The test unit was used on a number of different loads, large loco (2-8-4), and train drawing approx 0.8 amps for almost one hour, and the transistor was just warm. The train maintained a constant speed without adjusting the potentiometer. A small shunting loco, (0-4-0) was also tested, and it was found that both locos started and stopped very smoothly.

Another control unit could be connected as shown if required, but remember that the total output current must not exceed 2 amps.

Transformer, lever key and potentiometer.



PRECAUTIONS WHEN SOLDERING TO THE TRANSISTOR

1. Ensure that the soldering iron is hot enough to melt solder quickly.
 2. Tin the wires to be soldered to the transistor and diodes.
 3. Place a pair of pliers between the transistor and the end of connection to be soldered. This acts as a heat sink when soldering, and hold in position until the connection has cooled.
- The components for our prototype were supplied by the following manufacturers:

Mullard-Australia Pty. Ltd.

(Circuit also supplied).

Special Transformers Pty. Ltd.

Standard Resistor Co.

Ducon Condensers Ltd.

(Continued on opposite page.)

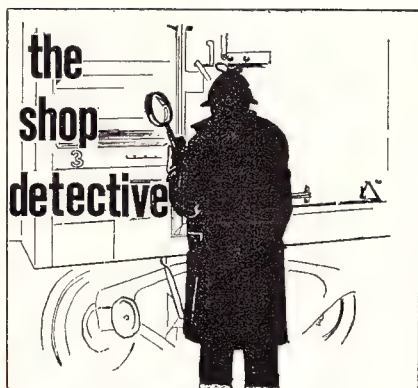
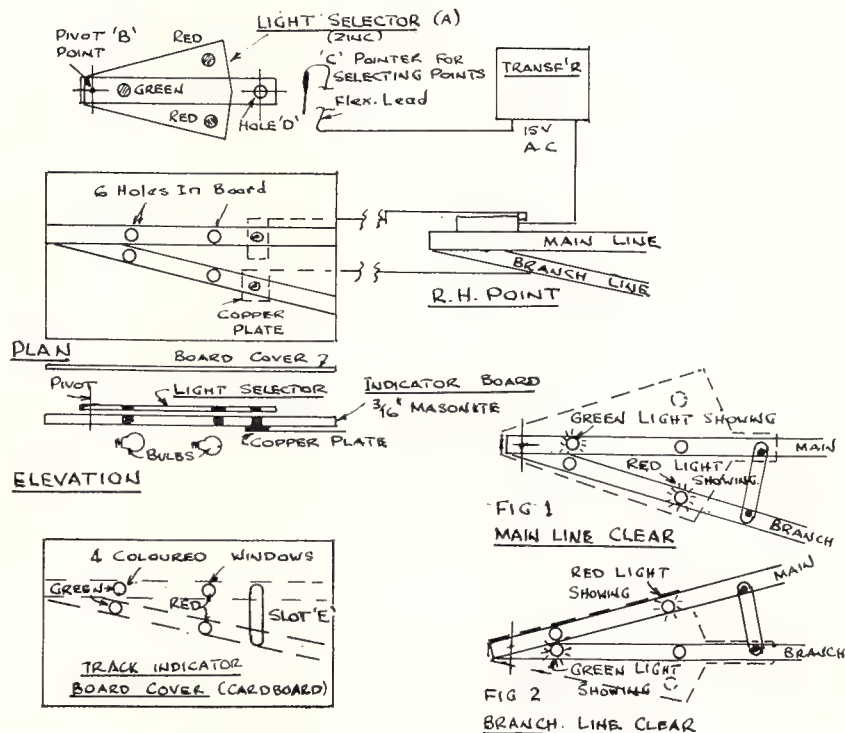
POINT SELECTOR SWITCH AND LIGHT INDICATOR

Ted George describes a simply constructed device.

This type of selector is simple to make and very effective. The light selector (A) is pivoted at point (B). The method of selecting the point is by inserting Pointer (C) into hole (D) in light selector (A) and through hole in indicator board to make contact with copper plate, which will operate the point. The lights themselves are alight all the time; I used one bulb for the two red light holes and one for green.

Figure 1. shows light selector in position for point to be all clear on main line. Figure 2. shows position for branch line.

The slotted hole in the board cover permits the light selector to be slid from one contact to the other.



Several items of interest noted at the Model Dockyard—
MEW switch stands and ground throws;
corrugated iron tank kits—two sizes—

each includes tap; corrugated iron sheets—
various sizes; styrene sheet—several thick-
nesses; Methyl Ethyl Ketone—to bond the
styrene; Northeastern wood shapes;
gear sets, 13—1 to 48—1 reductions;
Tri-ang people; lots of super-detailing stuff.

Like to buy your cars in knocked-down
form? The Dockyard has several types, in-
cluding English prototype 4 wheel wagons,
and Walthers passenger car kits in 'O'
gauge, La Belle HO passenger car kits,
and Binkley HOOn3 passenger and freight.
All these will provide quite a challenge to
the quite advanced modeller. 'O' gauge RTR
equipment and scratch building parts are
being continuously added to. I've heard a
whisper that a new shipment of Main-
line kits has arrived at the 'Yard, but
cannot yet be displayed on account of de-
lays at Customs.

Tru-Scale archbar trucks with leaf springs
are available at Melbourne Sports Depot,
Elizabeth St., City, where you may also
obtain various kits by 'K's'. Included are
the LMS rail-bus, GWR auto coach, SR
Terrier 0-6-0 tank, and the 'Bulldog' 4-4-0
with tender, latest 'K's' to arrive in Austr-
alia. Whilst at M-S-D, check the scenic
cloth, which comes in various colours, and
look over the junk box for possible barg-
ains. At the time of writing the special
was oddments of RTR track in HO from
various makers.

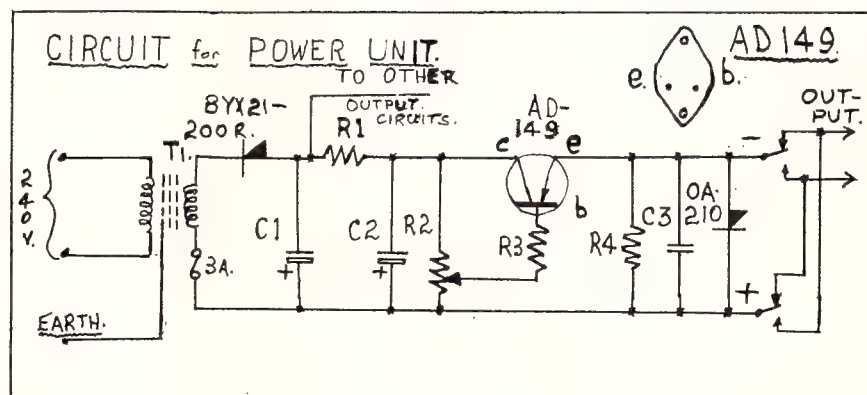
I can recommend McGraths, of Little
Lonsdale St., just down from Swanston St.,
for your requirements of electric switches,
connecting plugs (great variety), terminals
and terminal strip, and hook-up wire, which
comes in several colours.

List of Components

- C1 2000 uf. 50 VW.
- C2 2000 uf. 50 VW.
- C3 0.1 uf. 125 VW.
- R1 6.8 ohms. 20 W.
- R2 1000 ohms. linear pot.
- R3 120 ohms. 1 W.
- R4 4700 ohms. 1 W.
- Mullard Transistor AD 149.
- Mullard Diode BYX 21 — 200R.
- Mullard Heatsink 35 D 4 CB.
- Mullard Diode OA 210.

Transformer

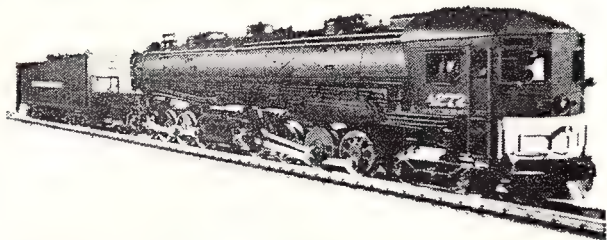
Special Transformers Pty. Ltd.
type ST 3523.



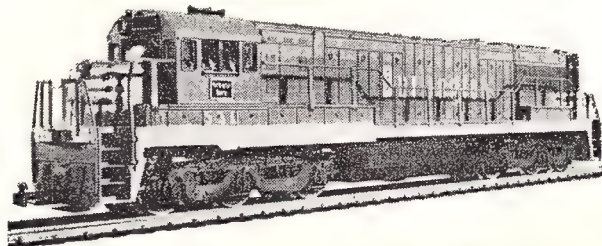
Rivarossi

The best in every way

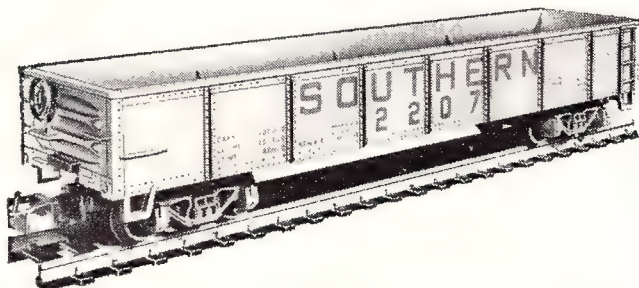
"THE BIG BOYS ARE HERE — HURRAH! HURRAH!" Your Hobbyshop has them in stock. No. 1254 — 18½ magnificent inches of Union Pacific articulated steam power, 4-8-8-4 with 14-wheel Centipede-type Tender. Pendular transmission, universal joints powerful traction, beautiful modelling, yet will go around a 16 in. radius curve. Headlight and all regular features \$69.95



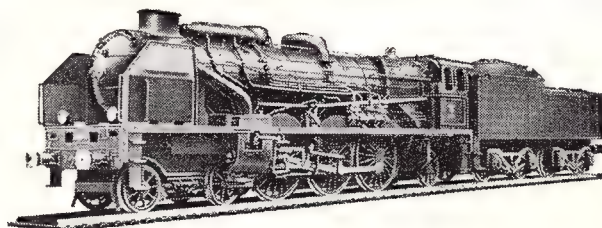
Southern Pacific, cab forward, articulated loco. Great big, ugly, beautiful, lovely, etc., etc. (depending on how much you like them!) now at a new lower price. No. 1248. Price now \$65.95.



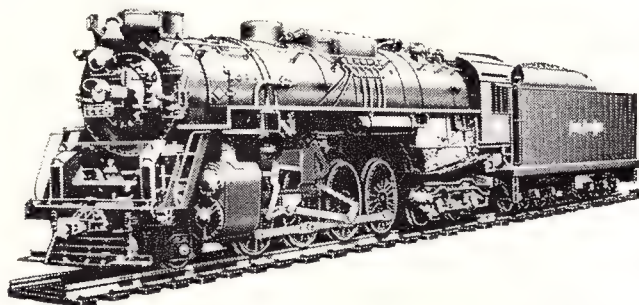
The G.E. U25C D.E. Locos with beautiful smooth running are available in three road names, all one price, and all have Rivarossi features. Jim reckons they run even better! Although, that's probably impossible. Nine inches long. No. 1812 Burlington; 1813 Pennsylvania; No. 1814 Northern Pacific Ea. \$25.95



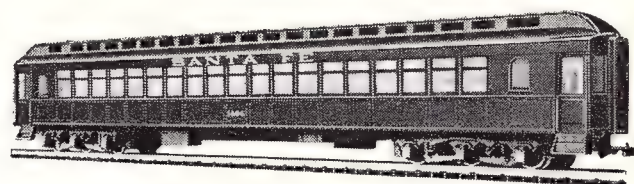
The illustration shows a kit, No. 12245 for the Southern — red lettering on grey ground, which is identical with the Ready-to-Rolls, except for price and road name. No. 12245 Kit is \$2.10. The Ready-to-rolls are of six roads at \$2.60, all of which seem popular at the moment.



A beautiful model of the French SNCF-type 231E Pacific 4-6-2 with most of its inside on the outside. Beautiful running loco. Just on 12 in. long. No. 1336 \$45.75



There's that "Berkshire" again! (Told that wife of mine, I simply gotta have one for me birfday!). The price is a little lower than a while back, not that that matters much when you have real beauty. Anyway it is \$43.95, No. 1244 and of length, 14 in. Nickel Plate Road. All regular model and mechanical features of "Rivarossi".



One of the five Santa Fe full scale length, clerestory roofed coaches with internal seating but no lights, six wheel bogies. This is the day coach sitter style as opposed to the luxury of the Pullman cars. Nearly 11 in. long. No. 2743, price \$5.85; other Santa Fe coaches are numbered 2716, 2717, 2718 and 2732 Combine, Pullman, Observation and Diner respectively. All \$5.85 each, plus 10c on the Observation Car. They are cars from the Golden Age of Steam.

There are so many "Rivarossi" lines from which to choose. You need a Catalogue priced at 65 cents, and a new Price List (Australian) No. 2/2 of April, '67.

"Rivarossi" tops in Locos, Rollingstock and Tramways and is available from Hobbyshops throughout Australia.

If in difficulty & for trade supplies —

AUSTRALIAN MODEL CRAFT CO.,

Box 118 P.O., Albury N.S.W. 2640
Australian Distributors

SCENERY THE EASY WAY

By RODNEY TONKIN

Real scenery has many shapes from rugged mountainous terrain to plains as flat as a billiard table. Usually the terrain depends a lot on the rock type present for its shape and contour. The volcanic rocks being hard tend to leave rugged irregular formations as the softer surrounding rock weathers away.

Granite country is usually dotted with large boulders. Sedimentary rock is the most common type and its formations vary from rolling hills to the great gorges of the Blue Mountains which are mostly of sandstone. The climate affects the shape also as the amount of rainfall affects the vegetation and the degree of erosion.

As far as railways are concerned hilly country is a nuisance as it adds mileage to the route and requires extra power to climb grades (luckily for model railway men). They usually follow rivers into hill country and then tunnel through the crest of the range, and out via another river valley. This is typical of eastern American railroads, i.e. Leigh Valley, New York Central, Norfolk and Western.

In Australia the N.S.W.G.R. crosses the Blue Mountains by climbing up onto the top of the plateau, crossing its top and then climbing down again into Lithgow by the use of short steep grades and much earth work and tunnels.

MATERIALS AND TOOLS REQUIRED

Plaster of Paris — 10lb. to start at approx. 8 to 9c a lb. 2 to 4 Saturday Heralds or equivalent for paper.

Cement colouring — Red Ochre 1lb., Yellow Ochre 1lb., Black 1lb., Green 1lb. Fine wire sieve — 2 to 3" dia. Plastic mixing bowl — 6 to 7" in dia. Empty C.S.R. Golden Syrup tins to hold dry plaster mixes for grass, soil or rock.

1" paint brush — Woolworths model Roll of masking tape. Sheets of plastic to protect layout and floor.

Fox Bros. powdered poster paint: — Burnt sienna — Raw umber. Bucket for water to mix with plaster and wash hands.

FORMING THE SHAPE

After drawing out the necessary shape of the scenery on paper or in your head, cut from masonite the shape of the scenery at the edges of the layout for strength and keeping light out of tunnels (nothing looks worse than a tunnel that has daylight in it).

Now string a web of masking tape below the level of the surface of the scenery and on it place wet crumpled up newsprint, and with this build up the shape required and let it dry slightly. Now add small pieces of wet newsprint over the form and check

A model railway must have scenery as even the best of models looks ridiculous rumbling along a length of track or a flat sheet of pyneboard. Scenery gives it a reason for pulling a string of cars from location to location as it tends to make the stations seem further apart and seems to expand the size of the layout.

to see if the shape of the scenery is right.

PLASTERING

Now comes the messy part of the operation, cover the floor, scenery and all track in the area adjacent to that about to be plastered. Now first rip newsprint into strips 2—3" wide and 9—15" long. Now mix up a batch of plaster of paris to a consistency so that when the paper is dipped into the mix it will come out with the plaster sticking to it, not running off, and lay these strips on to the paper mockup, cover the whole area with two complete layers of paper dipped in plaster and allow to set overnight.

We now have a grey-white coloured shape on the layout. To make it look like scenery it must have soil, grass, and rock on it. The rock is easily made, mix some plaster with some colouring to the colour of the rock, but a reasonable amount lighter so that by adding thin washes of poster colour some variation in the colour can be obtained.

To add the rock mix the plaster so that it will hold brush marks when painted on the scenery — all the brush marks should be the same way because in the area available for the average model railway there isn't space for faults as these are usually very large scale geological features. Brush on the coloured plaster, keeping the rock strata parallel (remember the beds of rock are usually planes).

While this plaster is damp take the earth-coloured plaster, put it in a fine kitchen sieve and sprinkle it on the ground where you want it and it automatically lands and holds only where it should hold. Repeat this with the grass.

When this has dried pour the thin washes of poster paint onto the scenery and it will collect in the crevices and

cracks in the rock, giving the effect of the rock extremities being weathered by leaching of some of the minerals in the rock.

COLOURS IN NATURE

Volcanic rock varies in colour from red through brown to black. It usually weathers to give a soil of similar but lighter colour. In the case of red rock the soil can be a distinct red in colour. Granite is usually a pink coloured rock, its scenery is usually rolling hills dotted with boulders — a light brown soil and sparse grass cover. Sedimentary Rocks.

Limestone — varies from white through grey to black — may be red if iron is present. Weathers to a grey soil usually.

Shale — light grey to dark grey — gives deep brown soil.

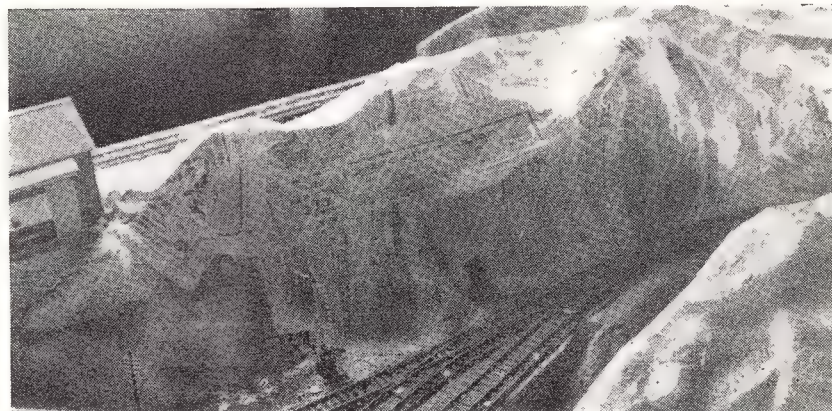
Sandstone — white — yellow — pink — red. Weathers to grey if boulders on surface. Produces soil of sandy nature darkened to brown by humus.

Grass — varies from dull green — olive to brown to yellow.

FINISHING

Now that your scenery is complete as nature left it except for a few roads, railway lines and earth works, it is time to add man's touch — billboards along roads by cutting ads out of magazines, telephone poles, fences, structures and some livestock to justify you hauling stock cars into the area. From now on the scenery is up to you. With imagination, coupled to observation of real railways it can look very good, but scenery is a very individual thing. Probably no two people use the same method but this may give you a few ideas to get started with and when you get something take some photos and send them to Scenic Route to encourage others to tackle scenery and remember "model railways are fun."

Prior to plastering strips of newsprint are stuck to the scenery shape.





P class C3285 at Pullabooka. The tail end of a bulk wheat hopper can be seen at the front end of the loco. Note the typical country waiting shed.

Pullabooka is a typical example of a small country station, with goods facilities catered for by one long loop. Being simple as it is, it is therefore easily modelled on any stretch of single track.

Pullabooka is situated on the Cootamundra-Stockinbingal-Parkes line in New South Wales. It is not a staffed platform, therefore intending passengers have to flag the train.

The Platform is only a small one, being roughly about 80 feet long. Station building consists of a small waiting shed; attached to this is the typical **Australian** corrugated iron water tank. The one and only toilet facility is situated at the end of the platform. This is also a corrugated iron structure with half round roof.

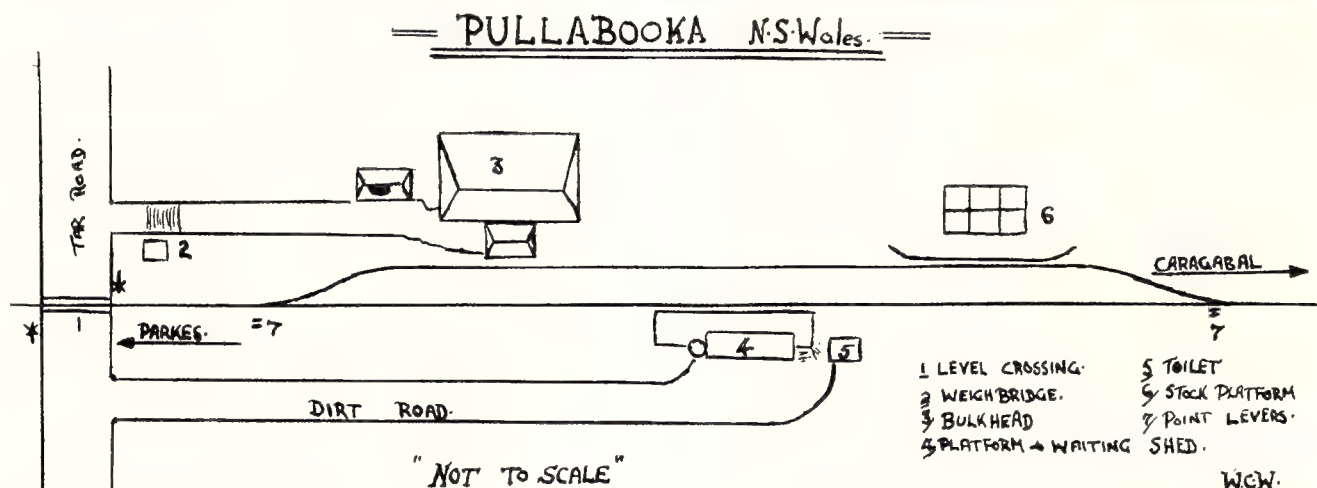
On the goods side, as traffic is mainly wheat, we have a bulkhead for wheat storage. No silos have been built here. For the benefit of those who wonder what a bulkhead is, it is actually a very large tin shed. Further up the goods siding we have a

stock platform with pens etc., rather on the small side and seldom used now. Access to the goods siding is only obtained by using the staff in the point levers.

The track itself is laid with 60lb. rail, and ballast is mainly ashes.

Traffic consists of one train each way daily, e.g., passenger down — goods up. Passenger train consists of a rail-motor, sometimes with four wheel van. Goods train was usually a P class C32 with various wagons and van. I say 'was' because in May, 1966 a 48 class diesel was seen in charge. Extra trains sometimes run, depending on the traffic.

The Pullabooka wheat bulkhead with its weighbridge for the motor trucks which carry the wheat from the farms.



A TENDER BENDER

The feasibility of constructing a lot of locomotives of the wood-burning and coal eras is precluded by the difficulty in constructing the rolled or flared top of the bunker or tender. Examples which spring to mind are most of the tender locomotives on about the first hundred pages of "A Century Plus Of Locomotives", and the locomotives of the first fifty years of any railway, as they were all built on the same general principles.

The simple device in the photographs facilitates performing this otherwise difficult engineering feat. The device

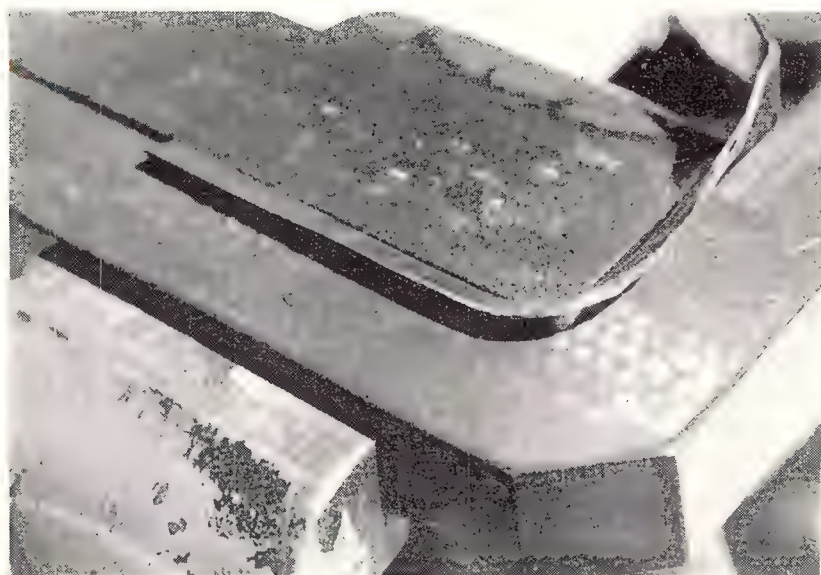
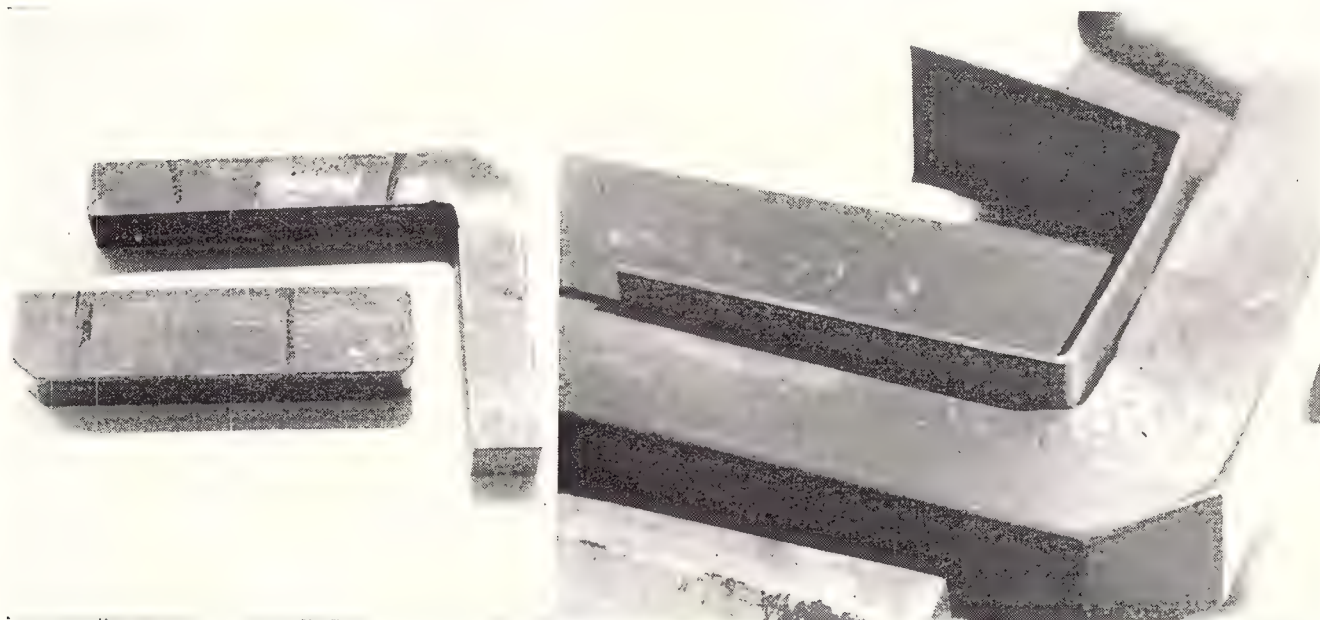
By TED WARD

should be about a quarter of an inch deeper than the distance from the beginning of the flare to the bottom of the side of the tender, to enable the vyce to grip the tool. The tool consists of a Block and an L-piece. The tool is gripped in the vyce with the beginning of the proposed flare at the top edge of the L-piece, and the corner of the tender pushed firmly into the corner of the L-piece by the Block. With the tool gripped firmly in the vyce, gently tap the exposed top edge

of the tender outwards, partly out, so as to gain an idea of the effect so far. After the first side is sufficiently flared, reverse the tool to flare the opposite side, which is of course of the opposite hand.

When marking out the job, it is important to allow between $1/32$ " and $1/16$ " of metal extra for the flared portion, as the oblique length of the flare will need to be longer at the exact corner. When the flaring is completed, the top edge at the corner will have a pronounced "dip" at the corner, but filing away that extra $1/32$ " of metal will even up the top edge.

Using this tool, the pleasing effect evident in the photographs is obtainable.



HAVE A GO

By PETER DAVIES

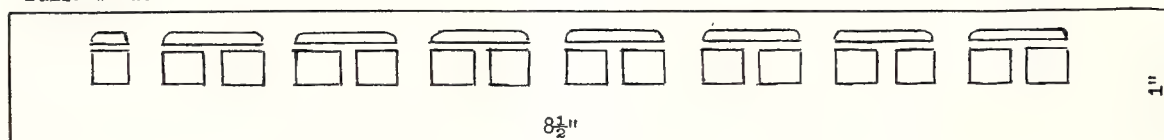
AN ACHIEVEMENT PROGRAM PROJECT

The July-August, 1966 issue of AMRM fired me with the ambition to enter for the NMRA Achievement Program. Ian Petherick's encouraging words were a stimulus; and the details given inspired me to "have a go". As I had been doing a bit of solitary scratch building of cars and rolling stock, it occurred to me to build a few more and submit them. However, I was still a bit diffident, so I rang Jim Blaney, and experienced at once the happy fraternity of the model railroad world. Jim invited me to his home and encouraged me to go ahead.

After that visit, I built a couple of freight cars and a passenger observation car for an Achievement Certificate. A visit to Russ Siddall's home for the judgement and a happy meeting with Laurie Jackson and a few others has given me more confidence in my own efforts.

COACH SIDE ASSEMBLY

Balsa wood.



A kind letter from Ian Petherick urged me to write about the building of one of the models I submitted — so here are the methods and details used in making an observation car of turn-of-the-century vintage.

Materials

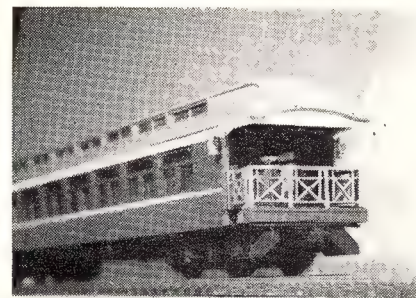
Some months ago I obtained a variety of Northeastern wood shapes from Mac Titcher of Dandenong — wood strips, scribed siding, quarter rounds, window moulding, belt rail, roofing shapes, and some Ambroid cement. I'm sure Mac will be glad to send any such items to those who can't get them locally. Some fine brass rod, some clear and green celluloid for windows, a Sentinel steps, a bit of nylon fishing line and a pair of trucks completed the list of requirements.

window, I found a small curved chisel in a cheap woodcarving set which punched out the curve admirably.

Mark out the position of the belt rail and apply.

Glue the scribed siding full length below the belt rail, and cement the letter board flush with top edge. Glue in scribed siding at ends between letter board and belt rail. Cut seven window posts to fit in the larger section between windows. For the small window posts, cut fine strips of the scribed siding and glue into position as indicated. A fine pointed tweezers is needed for this job. Finally glue a length of quarter round strip to each end. Repeat process for the opposite side.

Paint at this stage — at least around the windows. When dry, glue clear



The observation end.

celluloid along the lower section of windows, and a strip of green celluloid along the top part.

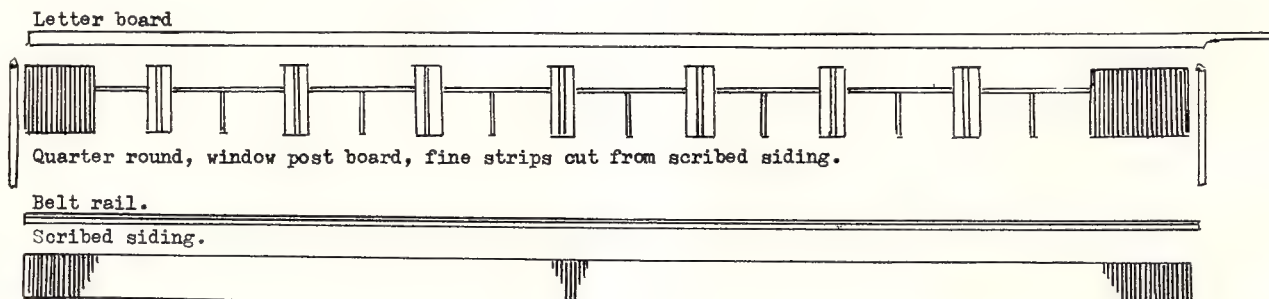
Underbody

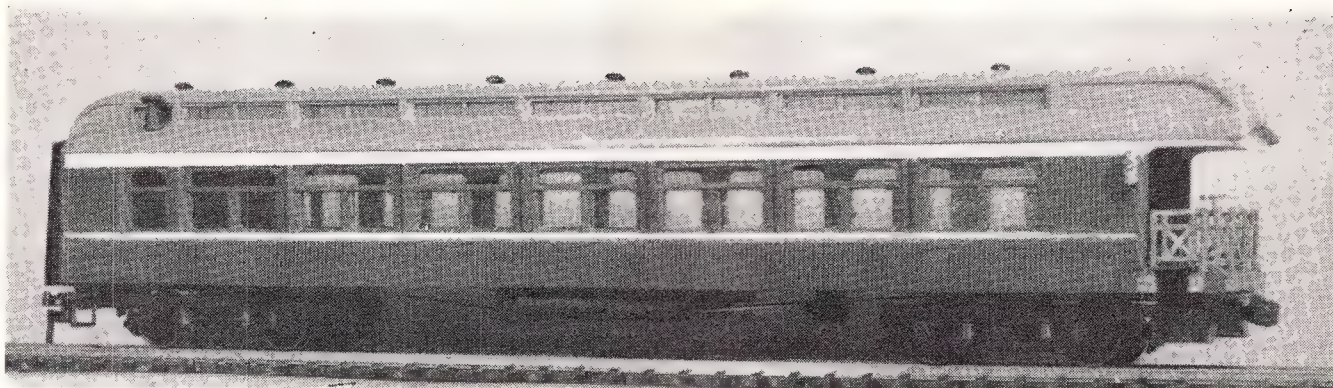
Study the diagram. Cut out the floor and mark the layout as indicated on the plan.

The gas tanks were made from a thin pencil, the ends being rounded with sandpaper. Fine dowelling would be better. Glue these onto a fine wood strip and glue to the underbody. Drill small holes through floor in line with the strapping, and thread thin nylon fishing line through and over the tanks in one operation to simulate the support strapping.

I made the queen posts by cutting code 100 rail to length, drilling a hole at each end and soldering in a shortened pin. A light channel was filed in the pin head to hold the truss rods. Nylon fishing line was again used for the truss rods, threading through both sides in one operation.

This much of the underbody should be completed before assembling with



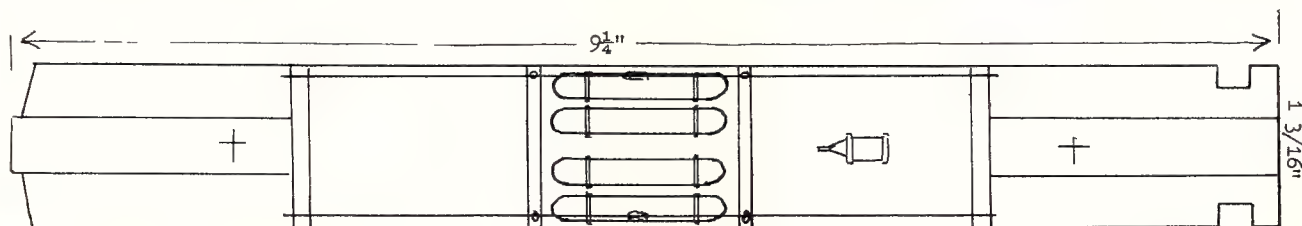


the sides, ends and roof. Other details, brake rigging, bolsters and cross pieces, and the steps can all be added later. The steps are a Sentinel casting with the top filed flat to fit flush under floor.

Roof and Clerestory

Study both the diagram of completed roof and the exploded diagram. Cut the roof shape to size, and with a craft knife and sandpaper curve the ends of the clerestory and roof sections as shown. Note also that on the horizontal section, the end matching the closed end of the car should also be curved to match the curve of the floor and end. The observation end of the roof should be cut straight across.

UNDERBODY ASSEMBLY



Cut a strip of green celluloid and glue it into the channel, lining it up with ends of car windows. Two fine wood strips are now glued over this along the top and bottom edges of the channel. Pieces of $\frac{1}{8}$ " strip are glued into each end of channel, again taking care to line up with car windows.

needs a fine brush and a steady hand if your green celluloid is to be kept spotless.

Car Ends

The blind end of the car is made up of scribed pieces and strip wood as indicated in the diagram. The end

The finished car.

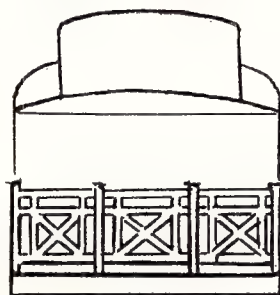
letter board should be cut from thicker wood. It is curved both in the horizontal and the vertical plane. Trim these curves into the wood with a craft knife and sandpaper.

At the platform end, the car partition door and windows were built up from strips and scribed siding as indicated. When glue is well set, smooth off, paint and cement on the celluloid windows. In the final assembly this partition was set back half an inch from the end wall of the car.

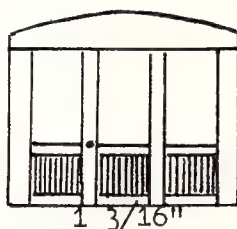
Brass Observation Rail

The observation railing provided the biggest challenge, and I made several unsuccessful attempts before lighting on

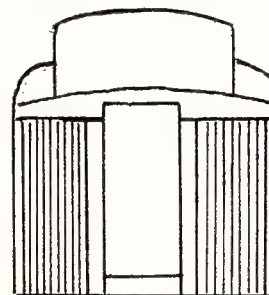
a practical method. Finally I took a block of wood and carefully marked out the pattern on it. Holes were drilled in the block, but all beyond the actual pattern. Lengths of fine brass rod with right angle bends at the ends were then inserted into the holes so that the rod lay along the



Observation end



Coach partition



Blind end of car

HAVE A GO (Continued)

lines of the pattern. Where one rod cut across another, I filed out both rods at the point of intersection so that each fitted into the other, and the final assembly was flat. Two sizes of brass rod were used — the larger for the uprights, the finer for the rest. When all was positioned satisfactorily each point of intersection was soldered. The whole assembly was now removed in one piece from the wood block, the extra lengths were cut off and a fine file used to adjust any irregularities. By the way, leave extra length on the

and square, using sandpaper if necessary.

Cement the roof into position, and smooth off joins with a craft knife and fine glasspaper.

Final Details

Add roof vents, diaphragm, turn-buckles to truss rods, ladders, grab-irons. I turned the marker lights from a piece of brass rod, drilled and added jewels; but you can buy them for a few cents.

Old buffers with sides turned down make splendid smokejacks.

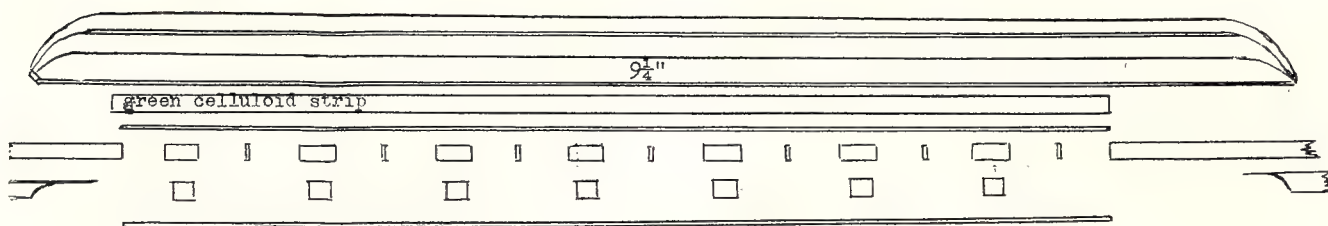
Brake fittings are added to suit. I use X2F couplers, but put a knuckle

after the final assembly you can go over all the accessible parts again.

I used Dulux royal blue for the basic colours with a deep yellow for the letterboard and belt rail — copied from the VR. The roof was painted cinnamon, and the interior a deep red. When the paint is quite dry, a final coat of Walther's DDV takes away the shiny look and evens out any inconsistencies in the finish.

May I say in conclusion that planning and building this car was tremendous fun — heightened by the fact that it was to be an entry for

ROOF AND CLERESTORY ASSEMBLY



bottom of the heavier upright posts to sink into the back platform.

The railing is made in three sections, the back and the two sides.

I covered the floor of the observation platform with fine scribed siding. A coverplate of celluloid was glued over

coupler on the observation end to improve appearances.

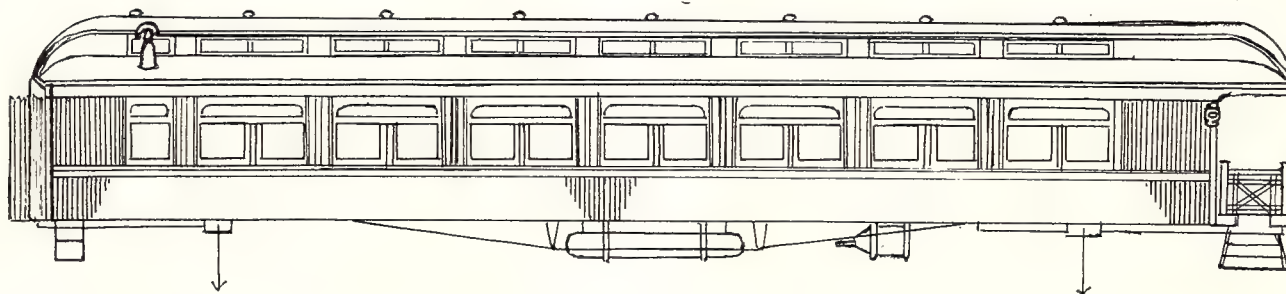
A pair of Central Valley T 25 trucks with brake shoes completed the job.

Painting

I find it better to paint as I go;

the Achievement Program. I hope that many more readers and NMRA members are going to do likewise. And if they want advice or help or encouragement they have only to approach their nearest NMRA representative.

VINTAGE OBSERVATION CAR



the well of the steps, and the floor painted brown.

Finally a piece of threshold wood was glued to the observation end of the car floor to add some finish.

Assembly

As just stated, cover the observation end floor with fine scribed siding and paint brown. When dry, drill carefully and insert your brass railing, gluing in with Araldite.

Glue your sides to the floor, then build up the blind end of the coach as indicated. Next insert the observation end partition 1/2" from rear wall of car. Make sure your top levels are right

* * *

JOIN THE S.C.M.R.A.

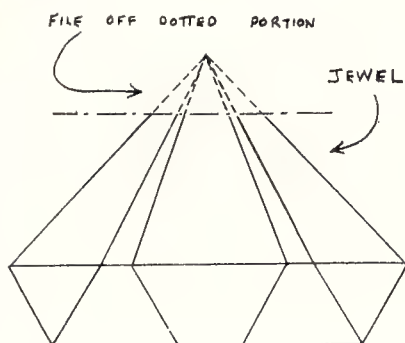
and get helpful monthly bulletins, data sheets, year book and also every issue of the Australasian Model Railroad Magazine. Send \$9.50 NOW to the Sec., S.C.M.R.A., 61 Hewitt Ave., Wahroonga. 2076.

* * *

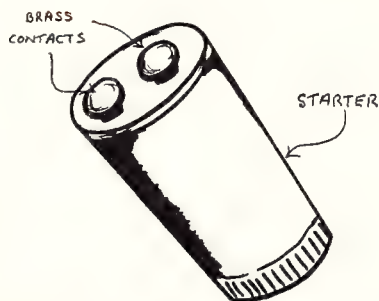
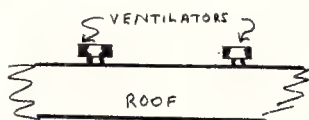
Available to all Financial Members of the newly formed Association, the "SOUTHERN CROSS MODEL RAILWAY ASSOCIATION", a copy of the Memorandum of Association and Articles of Association, at a cost of \$1.00 per copy, plus postage of 7 cents. At this stage only one copy is available at the above cost, and to financial members. If you are interested in your Association, write to the Secretary, 61 Hewitt Ave., Wahroonga, N.S.W. 2076, and order your copy now.

The Smoke Box

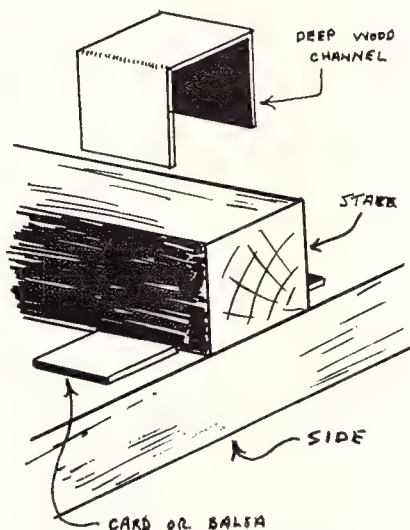
by Fred Gill



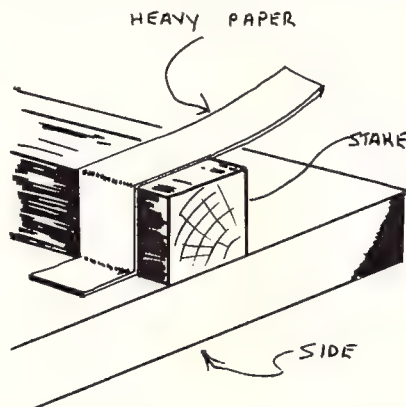
File a small flat on the back of your headlight jewels, as shown, and when installed it appears as though there is a bulb in the headlight.



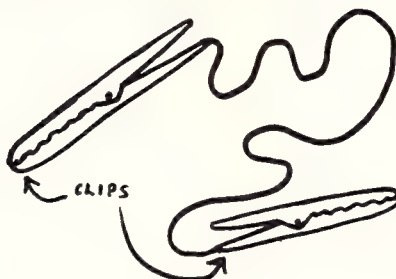
Old fluorescent light starters that have seen better days, can be used for model Railroaders. The two brass contacts at one end can be easily removed and used as "O" gauge Ventilators for coaches.



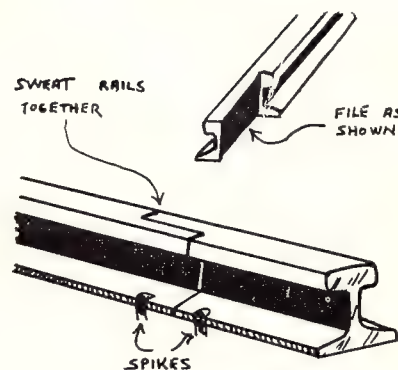
Commercial wooden channel sections can be used for stake pockets on your flat cars. Cut the sections carefully with a Jeweller's saw and use a P.V.A. glue. Small pieces of plywood, card or balsa are placed on the sides of the floor to match up with the channels.



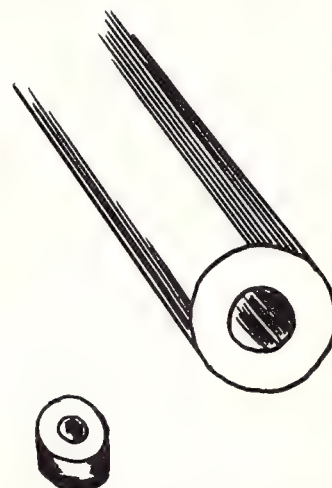
An easy way to make dummy stake pockets is to glue the stake to the side of the floor, then glue a heavy paper "pocket" around it, as shown, and onto the floor.



When wiring a layout it is often necessary to make temporary hookups to check sections of track, lights, point motors, etc. Small alligator clips soldered to lengths of insulated wires make good test leads. Make a few of these, as they can be clipped together to make one long lead.



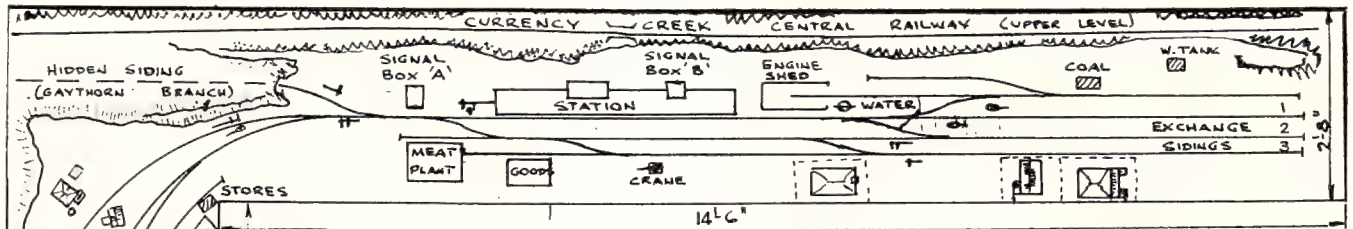
Here's a method of joining rails and not having to use rail joiners. File half the rail width off at the ends of adjacent rails so that the two ends dovetail together. Sweat the ends together, then spike in place.



Often a piece of metal tubing of appropriate inside and outside diameters can be used in place of space washers. Tubing is neater and cheaper than a lot of washers and can be cut to the exact length desired.



A length of plastic or rubber tubing slipped over the nozzle on a tube of cement makes a fine nozzle extension to reach hard-to-get-at-places.



THE MELTON VALLEY RAILWAY COMPANY

By D. J. McAULIFFE

PHOTOGRAPHS BY
ALLEN DAVIES

Plan shows layout at
Melton

The Author tells the story
of a layout which includes
a narrow gauge branch
line where the emphasis is
on operation.



In 1891, a $5\frac{1}{2}$ mile railway branch was built from the town of Hamden, on the G.N.R. (Great Northern Railway & Mining Co. of Australia) to serve the small dairies and farms of the Melton Valley.

Willmington, some 2 miles away became the railway depot, Melton at $5\frac{1}{2}$ mile was end of line. Gravel and timber loading added to the sparse revenue, but the "Melton Valley Railway Co." as the railway was called, was not prosperous and grew steadily decrepit with the years.

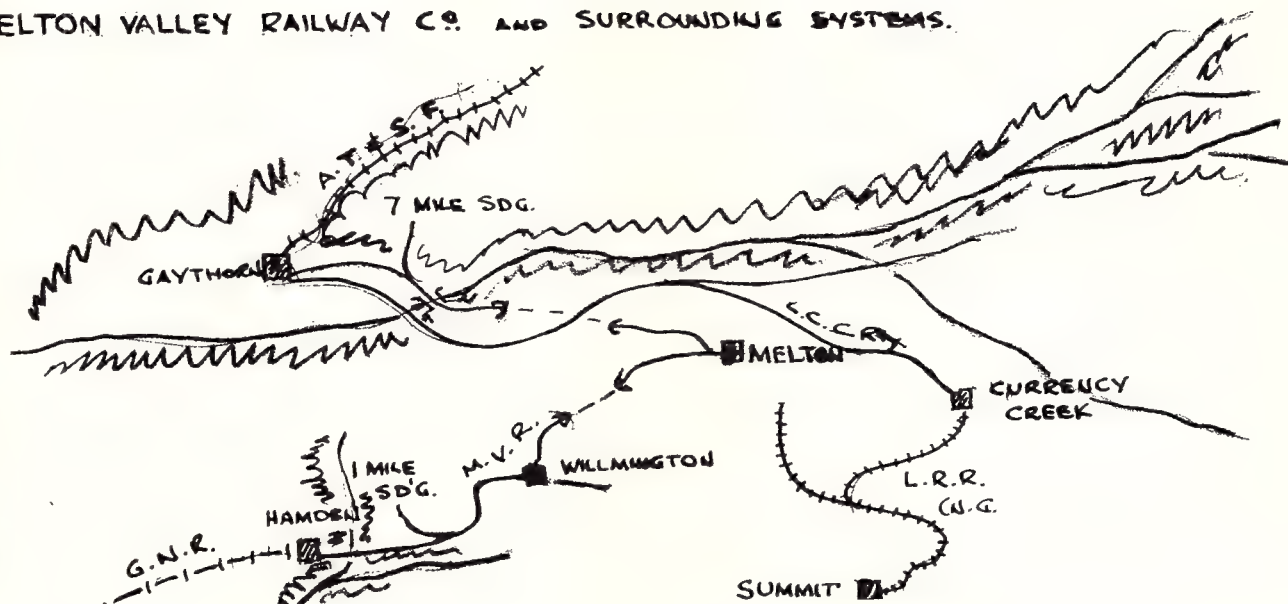
In the early 1930's coal mining began near Melton, and the business although never large gave the railway added life. The year 1950, money was found for an extension of two miles to the town of Gaythorne and connection with another large railway system (The Arunta, Tumbarumba and Southern Falls Railroad) with whom freight interchange takes place. This made the M.V. Railway Co., a short

The narrow gauge "Little Rocky" makes a living handling tourists and miners from Melton to the lake at Summit.

Coal is loaded into rail wagons at this primitive tippie in the Holloway Mine yards.



MELTON VALLEY RAILWAY CO. AND SURROUNDING SYSTEMS.



bridge route for ore traffic ex the A.T.S.F. to the G.N.R. docks on the coast, and today the M.V.R. is reasonably prosperous. Several small industries have since chosen to locate on land served by the railway.

With what looks like a sound future, the M.V. hopes to have many more years of happy railroading.

In 1967, and in actual fact the M.V. is decrepit. All locos and rolling stock are dirty and weathered. Many a wagon has been treated with a hot soldering iron to give them a battered and dented look. Track is PECO, with SENTINEL switches (points), laid direct on the baseboard, ballasted level with the surrounding ground. Rails and sleepers are painted for a weathered look, grass grows near, also between the rails to give a fairly neglected look. Area modelled is the Melton station and yards, also the nearby "Holloway Mine Co." (4 mile siding).

Built in a garage (the car never seems to use it), it is L-shaped measuring 17'6" x 9'8" x 2'8" wide. Surrounding scenery is a mixture of plaster, cement, asbestos fibre laid over chicken wire and carved with a knife. Painting is done with any handy paint, using four main colours—flat stove black, red, yellow and white. Liberal use is made of mineral turps to run the colours together and the paint is dusted with various sands and dirt to soak up excess paint, giving a dull rough finish. Trees and bushes are mostly homemade from local shrubs, treated with glue, dyed sawdust or flock as required.

Buildings are about an even mixture of scratch and kits. The proprietary models have had detail and weathering added where needed, and are generally preferred to the scratch built ones as my building knowledge is very rough, and the finished product is even rougher.

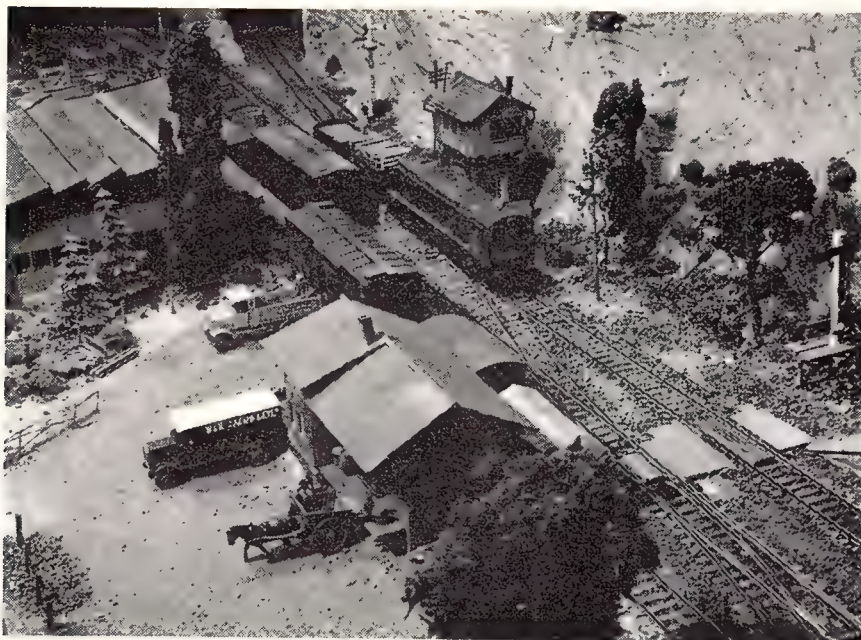
There are eight locos for the layout working, including one narrow gauge. The M.V. has two steam 0-6-0 tanks and one 1,000 h.p. diesel electric, the others belong to other companies.

British, Continental, American and Australian outline rolling stock is used, there being over 100 wagons, both 4 and 8 wheel (bogies). All wagons and locos are fitted with X2F couplings so as to enable them to work together. The slight difference in the two scales HO/OO may offend many, but is not too worrisome to the average enthusiast or visitor who comes around to operate, or to have a general railway get-together. Passing through this

State, one can occasionally see automatic couplings on wagons still fitted with side buffers, also 4-wheel 14-ton capacity wagons next to 75 foot long bogies of 50 ton capacity, so the mixture of makes and sizes is not quite glaring when one becomes used to it, providing care is taken in selecting the wagons to blend with the surrounding railway scene.

The rich ore traffic is the difference between profit and loss for the M.V. Here an ageing Baldwin 0-6-0T makes up a train in the Melton exchange sidings, preparing for the run to Hamden where a G.N. loco will take over.





Modern power on the M.V. is this 1000 hp. Bo-Bo d.e. shunting two loads of pit props to the nearby coal mine. Building on left is a small meat industry. Goods shed in foreground. Old road vehicles are probably so because of bad roads or Scottish ancestors. Signal box controls movements on branch and main line at up end of yard.

All locos, wagons and coaches must be for a purpose, open wagon loads are all removeable, and I am rather strict that at no time does a wagon go wandering around first one way and then the other with the same load in view. A great deal of my railway interest is in the full size practice, historical and modern in various parts

of the world as well as in Australia, so I am a bit inclined to be a collector of a rough sort. Thus an American civil war wagon may be seen in a train with a 1914 World War 1 German wagon, plus P.O. British plus modern bulk hoppers for flour etc, all hauled by perhaps a D.E. loco (many shudders of horror I fear). This unlikely assortment of old wagons running today will have to be explained by thrifty management.

The main emphasis is on operation, the layout being signalled by hand operated lower quadrant signals, and having around eleven trains per day plus shunt movements to and from the mine and industries.

I make no claim for the layout to be a good working scale model but have instead tried to create an atmosphere of reality with a mythical railway in miniature.

The consist of the up morning mixed is two vans of milk and market produce, one of mail and the only passenger coach on the M.V. Loco is Rivarossi 0-6-0T.



CORRUGATED IRON BY THE MILE

By HOWARD G. ARMSTRONG

Almost every building around the railway scene in Australia has some corrugated iron on it somewhere. Even roofs of some wagons are covered with it.

The only commercial corrugated iron I have located is the small 3" x 1½" sheets of pressed metal stocked by leading hobby shops. However, the cost of these makes a large job, such as a station roof, very expensive.

Here is a simple, cheap and quick method of making all the iron you need which I have found quite satisfactory.

The materials you will require are—

One sheet of commercial corrugated iron, mentioned above. Some aluminium foil pinched from the kitchen

while the wife is not looking and a piece of soft ¼" balsa approximately ¾" wide. A tube of Aquadhere glue.

Cut out section of roof or wall required in cardboard. (I find Pasteboard ideal).

Now lay a piece of aluminium foil, large enough to cover section, over the piece of corrugated iron and rub end of balsa over it. The foil takes the shape of the corrugations easily. Move foil and replace so that the last two or three grooves stay over iron to locate corrugations. Carry out this procedure until all the required area of foil is corrugated. Handle carefully at this stage as the imprint will press out.

Coat the piece of card with a fairly liberal coat of Aquadhere. Place corrugated foil on it and press down lightly so as to force glue into the ridges making sure the corrugations run the

way you want them to. The laps in the sheets of iron are made by running a sharp pencil across sheet using a rule as a guide. Put to one side and allow to dry overnight.

When completely dry trim foil to edge of card with a sharp knife or razor blade and the section is ready to go into position.

The foil can be left as is, to represent new iron, painted with a thin wash of silver paint and turps to represent weathered galvanised iron or painted.

A thin strip of foil (cut with sharp scissors) creased along a steel rule can be used for ridge capping.

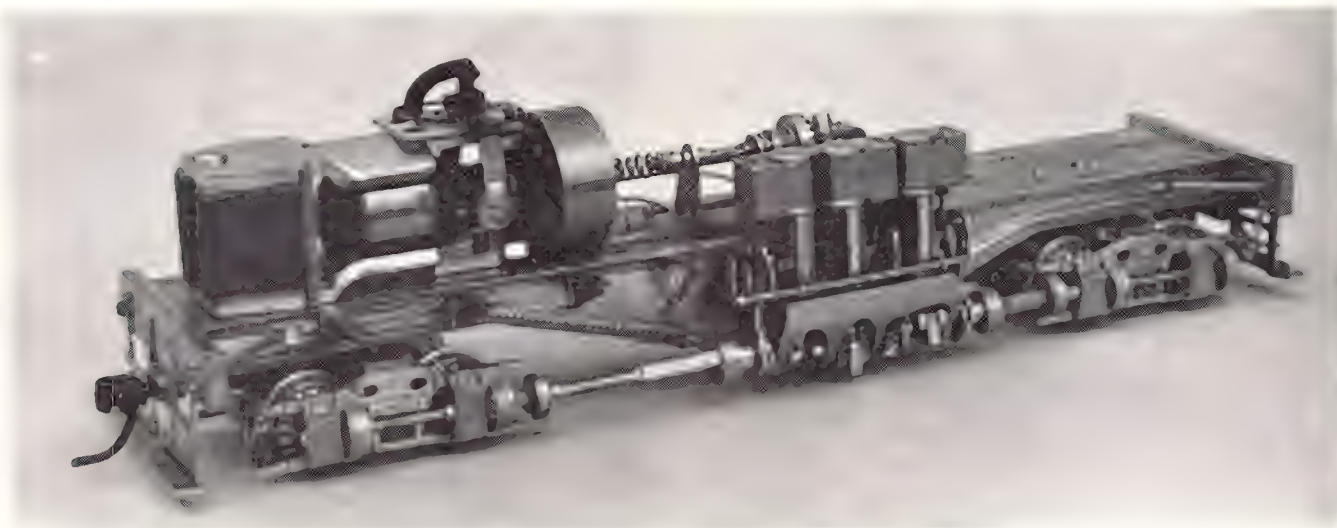
If the section has windows cover them completely and cut out after the foil is glued into place.

This method is ideal for that small fettler's hut or a large roundhouse, but I suggest you practise a bit before tackling a large job.

A SHAY LOCOMOTIVE IN 4MM SCALE

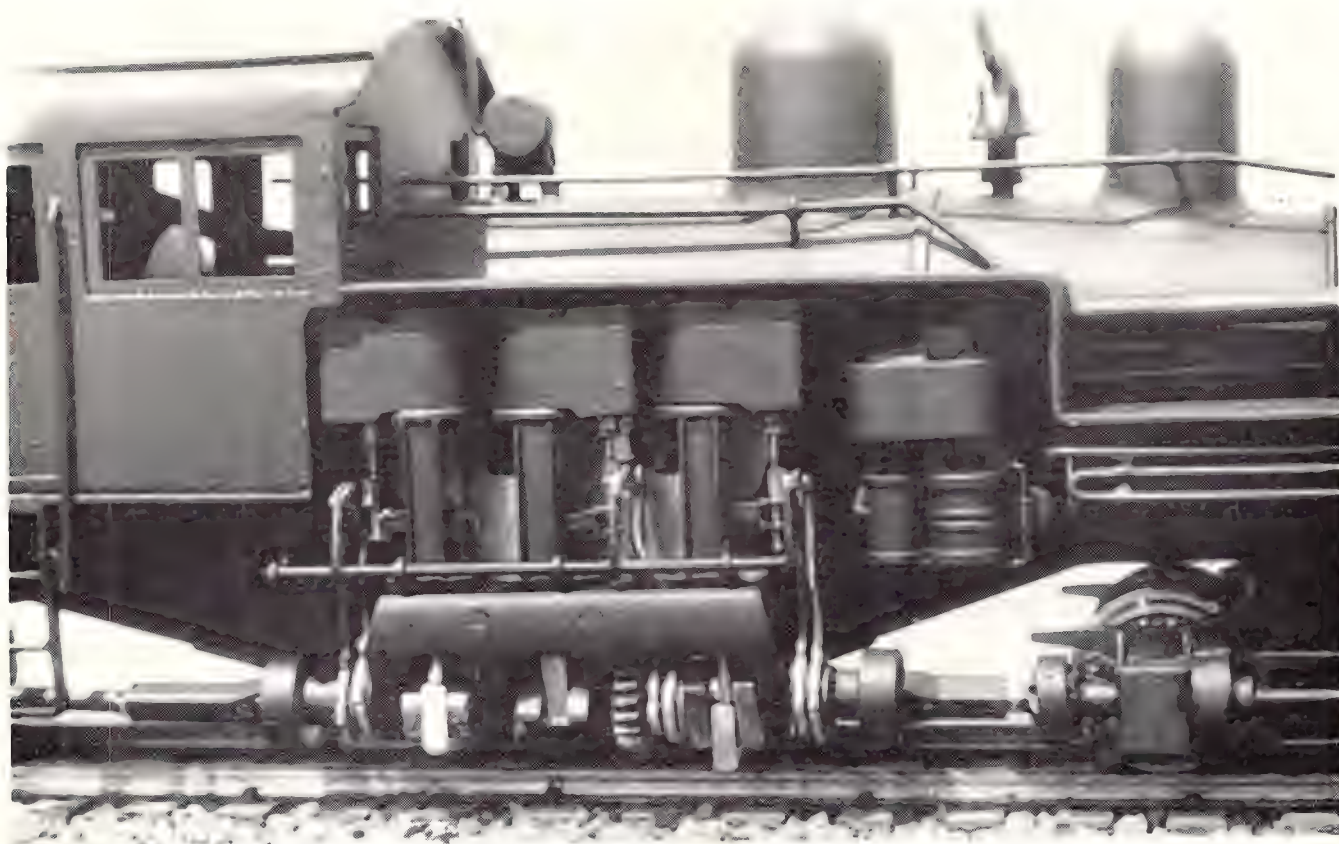
Rarely do we receive photographs of models so exquisitely built as the Shay by Don Turnbull. Don is one of the older members of N.M.R.A. in Australia. He writes "these locos always fascinated me, possibly as a challenge. So with the aid of plans from the January, 1957 Model Railroad and a photo of a prototype purchased from Lima Ohio, I was able to fabricate one with minor modifications."

The model is built to a scale of 4mm, no castings used, being entirely made of glass and nickel silver. The building up of the crankshaft and the cutting of the various bevel gears were the most tedious problems, says Don, as there was nothing available to purchase here in Sydney. The motor is of Japanese origin and about equal in size to a DC60 and is the only commercial item used.



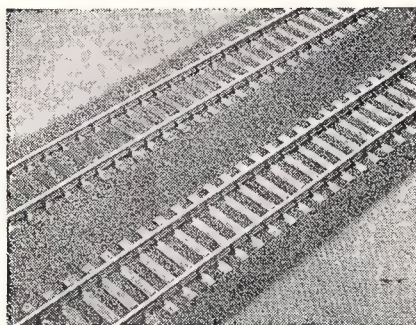
Above: With the superstructure removed the mechanical details may be seen.

Below: This photograph shows the vertically mounted cylinders and flexible drive.



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The Greatest Name in Track-work for HO/OO—N—Narrow Gauge.



FULL RANGE OF WONDERFUL WAGON KITS NOW IN DEALERS' HANDS —

A complete new supply of these beautiful kits similar to the one illustrated have come to hand and are in your Regular Hobby Dealer's now, as follows:

R-62: Low sided Wagons, 3-plank, GW, LMS, NE, SR, BQC, Pwllheli Granite	Each	\$1.88
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R-54: Coal Wagons, 7-plank, Cliffe Hill, Jenkerson, Baddesley, Kingsbury, Ward, Dearne Valley	Each	\$2.10
R-68: Lime Wagons with tops, Dowlow, Crawshay, South Wales	Each	\$2.25
R-72: Box Cars, Izal, Colman's Mustard	Each	\$2.45
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SL-100X Fully Flexible Streamline HO/OO Track with its 130 imitation wood-grained sleepers per yard, nickel silver scale section rail, fully flexible as you buy it, with no ties and anything to cut, bends freely to where you want it — only \$1.10 per yard length. To match this, when required, with Brass Rail SL-100B at 98c per yard. A new version in imitation of concrete sleepers as used in other countries, with realistic ties, at \$1.15 per yard. Counterpart tracks to SL-100X are available in N Gauge No. SL-300X and in O Gauge No. SL-700X, whilst for Narrow Gauge 9mm gauge track, the Peco Streamline SL-400X — so called Crazy Track in 18in. lengths. Peco Stocks are again fully available at your Hobby shop together with a Full (free) Price List.



YOUR HOBBY SHOP

Most Australian Hobbyshops are out to do the best possible job of supplying your needs and satisfying them with high quality products. To make your hobby strong in Australia, give it a chance to grow by supporting the dealer who gives you the service you need.

PUBLICATIONS & NEWSLETTERS

On 2nd March of this year No. 1 issue of "Model Railway Newsletter" was in the hobby shops of Australia. Since then, our publication has been available almost weekly (for one cent), to try to keep abreast of the week to week happenings in the 38 brands which we distribute. You can ask on the 2nd and 4th Thursday of each month for one of our publications — there SHOULD BE a new one there (all being well). Not all hobby and toy shops have them, because they must be ordered from us before the shop gets supply. Postage is too high for single copies, so the best thing to do is call on your hobbyshop regularly and ask. No. 17 is dated 13th July, 1967 and is just going out. You should ask for "The Railway Modeller", England's leading model railway magazine, which is published monthly to be kept for you each month, as well.

In addition to the "Model Railway Newsletter" available twice monthly, we have been trying to get into the tempo of producing an issue of "Peco in Australia" and "Rivarossi News" at least once every three months to give you specialty news of these items. A third publication at present in preparation known as "What's with N Gauge in Australia" should make up the consist of one special publication per month. It is taking us a long time to get the plans off the drawing board and into operation. There's a lot of work in preparation, and in the actual production, but we're slowly winning the battle, and by the time this magazine issues, "What's with N?" should be available in your hobby shop or direct from us.

We hope finally to be able to keep you really informed on news, as it happens... or almost.

OTHER LINES

N GAUGE: Arnold Rapido stocks are somewhere near full, and this range as famous in this gauge as Rivarossi is in HO, you will find has most of what you want and mechanically good too. Seven other brands support the Arnold Rapido with scenery items, structures, etc. Ask for full list. Peco — Kibri — Merten, etc., etc. are standing stock lines.

HO — 9 or Narrow Gauge using 9 mm track: Ask us here for current price list. Egger-Bahn prices are different all over the place, so we only know ours. Gem Narrow Gauge lines for 12 mm gauge track are also included on the Narrow Gauge listing. There are many interesting lines.

SUBSCRIPTIONS TO MAGAZINES (Annual):

"The Railway Modeller" \$5.00
 "Australasian Model Railroad Magazine" \$1.80

THE SCENIMAT (New Zealand) range of scenic materials is now back in full strength. Wood Flour Flocks for earth surfacing in many colours at 35c per generous sized packet; Minerals, gathered, cleaned, coloured, in imitation of various minerals, such as ballast,

concrete road, quarry material, etc., in packets at 35c are also available.

KEEP ABREAST OF CURRENT DEVELOPMENTS by picking up from your dealer every Thursday our latest publication. You'll help us to help you, if you do. There was a "Rivarossi News" dated 1st April. It was a nixy one!

ANYTHING ELSE: See you in the "Newsletter".

For trade supplies and modellers in difficulty —

AUSTRALIAN MODEL CRAFT CO.,

Box 118 P.O., Albury N.S.W. 2640

Phone: Albury 21 2473 (9 a.m. to 6 p.m.)

TURBOS

Target date for the opening of the new service has been set for October 29.

The Turbos will be faster, lighter, quieter, smoother, and are expected to cost 30 per cent less per mile to run than conventional trains.

Their aerodynamic lines reduce "dead" weight and air resistance. The smooth aluminium-skinned Turbos accelerate and decelerate faster than standard diesel trains. The improved airbrake techniques with separate magnetic brakes that are applied directly to the track instead of the wheel, together with the reduced train weight achieved, permit faster and smoother stops.

Canadian National's **Rapido**, considered the fastest intercity passenger train in North America, now runs between Montreal and Toronto in four hours and 59 minutes. The Turbo will take 3 hours 59 minutes, maintaining an average speed of 84 miles an hour while observing all the existing speed limits for the run.

A new type of suspension system which, combined with single guided axles in place of the conventional equipment (a Turbo has only 9 axles and associated equipment compared to 28 for a comparable diesel train) steers around curves with greater passenger comfort, and with no cost in track changes.

The lower centre of gravity, pendulous suspension system, and guided axles system enables the Turbo to round curves at speeds up to 30 per cent greater than the **Rapido**. Like an aircraft, the Turbo's carriages bank inwardly under the centrifugal force, as opposed to the outward motion experienced in all conventional trains rounding a curve at speed.

The new trains are double-ended and the Montreal-Toronto run will be operated in tandem sets of 14 carriages with a total capacity of 680 passengers.

Canadian National's new trains will be powered by Pratt and Whitney aircraft gas turbine engines, running on diesel fuel. Each Turbo set will be equipped with four turbines for propulsion, two in each dome car, and a fifth turbine linked to a generator, supplies power for the train's electrical equipment.

Engine warm-up and idling, mandatory with diesels, is not required from gas turbines. They start quickly, even when the Canadian temperature drops to 60 degrees below zero, reach their full power in seconds, and the gas turbine engine is quieter, it barely sighs even at full throttle.

Maintenance will be easier — procedures will be similar to those followed for aircraft, with parts replaced on a preventative maintenance basis. All wearing components, such as tur-

With their design and operation based on aero-space technology, and powered by aircraft-type gas turbine engines, Turbos are the new lightweight passenger trains designed by a division of the United Aircraft Corporation for the Canadian National Railways 335-mile Montreal-Toronto service.

bines, axle sets and air-conditioners, can be replaced within the hour.

A 14-carriage Turbo of 680 passenger capacity will weigh about 600,000 pounds empty. A comparable conventional train of 13 carriages with

three diesel locomotives, weighs 2,300,000 pounds and carries 40 fewer passengers. The gas turbine weighs less than one pound per horsepower produced, compared with the 15 pounds for one diesel-produced horsepower.



APPLICATION FOR THE ISSUE OF A LICENCE PURSUANT TO SECTION 24 OF THE COMPANIES ACT OF N.S.W. 1961.

NOTICE is hereby given that application has been made for the issue of a Licence pursuant to Section 24 of the Companies Act 1961 directing that SOUTHERN CROSS MODEL RAILWAY ASSOCIATION be registered as a Company with limited liability without the addition of the word "Limited" to its name.

The Main objects of the proposed Company are—

- To acquire and take over the assets and liabilities of the present unincorporated body known as "The Southern Cross Region of the National Model Railroad Association" including "S.C.R. Publications".
- To promote the science and practice of the hobby of model trains, railways and railroading in all branches and the knowledge and efficiency of persons engaged therein.
- To promote the aims and objects of "The National Model Railroad Association Inc." of Canton, Ohio, U.S.A.

A copy of the Memorandum and Articles of Association of the proposed Company may be inspected at the Offices of Messrs. D. J. Billington & Co., Solicitors, 85 Orchard Road, Chatswood, N.S.W.

Objections by any person, incorporation or association to the issue of the licence should be forwarded to New South Wales Registrar of Companies on or before the twenty-fifth day of July, 1967.

Dated at Sydney this fourth day of July, 1967.

Signed A. H. Johnston,
President,
Southern Cross Region of the
National Model Railroad Association.

The above Notice appeared in "The Australian" paper published on Thursday, 11th July, 1967, and this notice is given so that all our members and others interested in our Association may know. The Registrar of Companies advised us through our Solicitors that Our Memorandum and Articles of Association were accepted on the 5th April, 1967, and it has taken this long to complete all the other formalities.

NARROW GAUGE MAGNETICS

By IAN G. PETHERICK

For the perfectionist scale modeller of narrow gauges, and particularly old time narrow gaugers, scale couplers mean link and pin, or perhaps a "chopper" hook. But for others modelling in HOn3, or similar narrow gauges the operating disadvantages of these couplers leads to looking in awe at the standard gaugers' Kadee magnetic.

For HO this is admittedly overscale, but they do look convincing, they couple and uncouple, and with delayed uncoupling they give versatile operation. In Australia they are expensive and this is their main drawback to many modellers. In fitting Kadees many possibilities are afforded by the choices of various shank lengths, and mounting pockets, or studs. It is worth a little time to chase the right Mark of coupler for the saving gained and improvement in operation. For narrow gauge cars, the coupler is frequently fitted between wheel flanges with far less space available than on the standard gauge counterpart.

Uncoupling

For the benefit of readers unfamiliar with Kadee uncoupling here's how it works. The "ramp" is actually a magnet, either permanent magnet, or an electromagnet. In either case the magnetic field is a transverse field, that is with North pole near one rail and South pole near the other. The "glad Hands" (curved wires fitted below the couplers) are attracted by the magnet's poles. As they swing outwards the jaws of the couplers open (See figure 2.). For delayed uncoupling the cars must be moved apart a little way then brought together again. Provided the magnetic ramp is strong enough, the whole coupler swings on its pivot and the jaws meet in the "delayed drop" position, (See figure 3.). In this position it can be seen that when the jaws close (when away from the magnet's influence) the couplers don't engage normally. The cars can be pushed (but not pulled) to any convenient position for spotting. This is called "delayed dropping".

Installation of Ramp

For standard gauge HO and S scales, and for narrow gauge in $\frac{1}{2}$ " scale, (say On3), there is sufficient room between the running rails to fit a magnet at least $\frac{1}{2}$ " wide. But in the smaller gauges a magnet which will fit is not large enough to work. Note that each coupler jaw has a small hook at its tip (See figure 1.). The couplers must each move sufficiently to clear the opposing hook to uncouple. The purpose of hooks is to reduce the possibility of accidental uncouplings.

A solution found workable is the

"ramp" shown in the drawings (See figure 4.). A magnet placed under the rails, with two pole faces outside the rails provides a wide transverse field. The magnet and pole faces complete come from magnetic door catches (See figure 5.). Turner, manufacturers of building hardware, sell one such catch, and as well some unbranded models are available for slightly less cost. (Approx. 40c each). The important dimension is the distance between the pole faces, approximately $\frac{3}{4}$ inch.

To install the ramp, remove the outer plastic cover of the catch and remove magnet and pole faces together. Do not remove either pole face from magnet if it can be avoided as this will weaken the field of the finished ramp. Rotate the magnet between the pole faces so that the flat face is uppermost. On this face stick a strip of P.V.C. electrical insulating tape. Cut into the base board where the uncoupler ramp is needed. The magnet should be installed as high as possible on the underside of the rails, but the pole faces must be lowered so that their tops are flush with the rails.

The field of this magnet is not distorted by commonly used brass or nickel silver rail. Modellers using some proprietary makes of track should check whether their rails are of steel in which case a trial will be needed to see how much effect is caused. The trials done on two layouts have not included any steel rail.

Installation of Couplers

The installation of Kadees on narrow gauge cars follows that of standard gauge practice. A little care is rewarded by better operation. The particular problems are narrow space between wheel flanges, and the lower coupler height. The second requires bending of the glad hand to give standard clearance above rails ($1/32$ " when the coupler is installed. The first problem is solved by correct choice of magnetic. The MKD4 and MKD8 don't need bulky pockets so take up the least space. If MKD5 and 10 style are purchased the coupler pocket (draft gear) must be cut away at the sides and ends to allow the bogies (trucks) to swivel.

Operation

In operation there has been found to be slight differences in performance and reliability of delayed dropping according to type of coupler gear and weight of cars. A longer trial period is needed to investigate these as initial trial over 3 months has been restricted to two HOn3 layouts. A car weight of 1 $\frac{1}{2}$ oz. for a 28ft. box car in HOn3 is satisfactory although this is below the NMRA recommended weight.

A further report will be made later.

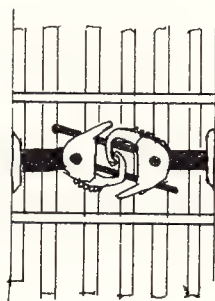


FIG. 1

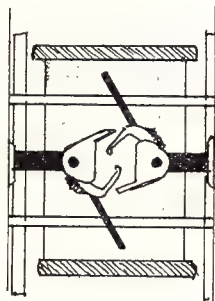


FIG. 2

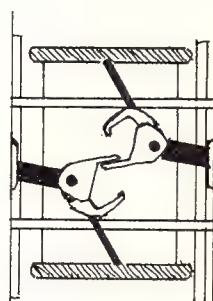


FIG. 3

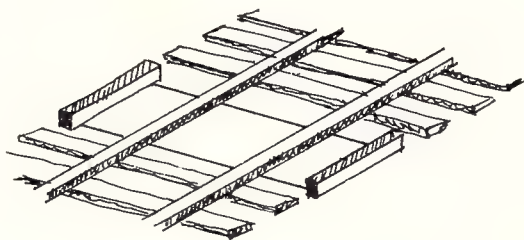


FIG. 4

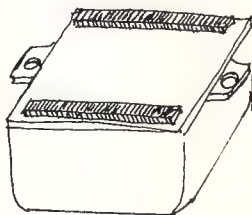
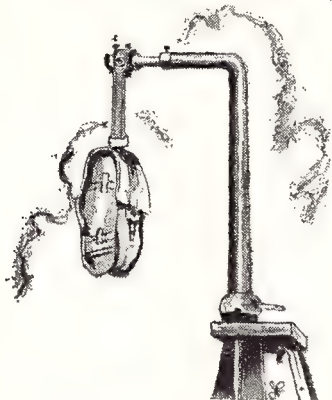


FIG. 5

MAIL BAG



Sir,

May I make a suggestion towards the contents of AMRM. Could the magazine include a regular article concerning track layout? Because of the track and route mileage within Australia it should be possible to draw up these plans from prototype operation from all parts of Australia, without a great deal of repetition as is often seen in other overseas magazines.

These plans could be sketched out by modellers living in an area with some form of railway in the vicinity of their home, and then submitted to the magazine to be drawn up for publication. This will encourage many readers to make contributions towards the publication if they think that their particular diagram warrants an explanation of the particular working.

I feel that many modellers would benefit from these articles because there is always a person (such as myself at present) in the planning stages of a model empire who wishes to know how to model a prototype arrangement. This could be some source of encouragement for Australian prototype modelling or for further contribution to the magazine.

I hope this suggestion will be of use to the magazine. STEVEN MORRIS.
Como West, N.S.W.

Sir,

Find enclosed a short article describing the method I use to make corrugated galvanised iron which may be of some use to Les Hardaker (Mail Bag May/June 1967).

After four years in the country I understand the problems Les is up against; however, I cannot agree when he says it is impossible to shop by mail.

I can recommend both The Model Dockyard, Melbourne, and the Australian Model Craft Co. of Albury to him, for their Mail Order service. Both are prompt and the longest I have had to wait was seven days.

The Model Dockyard produce a detailed Price List of all their HO scale stock items which is well worth the 25 cents they charge.

As a sample of the service offered I quote this example. Over 12 months ago I ordered a small part costing 50 cents from The Model Dockyard. They replied that the part was not available and returned my money. Last week I received a card advising that the part was now in stock. Even your local Hobby Shop couldn't match that type of service.

HOWARD ARMSTRONG.

Yass, N.S.W.

Sir,

The Case for an "O" Gauge Preservation Society.

In this day and age, when societies are being formed for the preservation of vintage cars, buildings, ships and trains, it seems unusual for model railway enthusiasts not to be doing the same, as something like this is desperately needed to preserve one phase of our hobby, "O" gauge modelling.

This situation was impressed all too clearly upon me when I recently went into the hobby shop in Sydney and asked for the bare necessities for building an "O" gauge wagon. When the laughter subsided, I found that I had been scooped by somebody who bought up their entire stock of "O" gauge wheels, only the previous day, while knuckle couplings and axleguards — huh!

Now at this point, I must admit that I called their bluff and asked for the same items in HO gauge. Wheels and couplings, yes, but how do you build the ubiquitous four wheeled stock without axleguards?

On my original theme, however, it would seem that "O" gauge components must be imported from England and America. If this would be difficult enough for the small band of existing modellers, how then can we expect any new modellers in this gauge.

I feel that "O" gauge enthusiasts could form quite a strong group, along the lines of the English "O" gauge Guild, even allowing for separate 2 rail/3 rail fine scale/coarse scale combinations. As a co-operative society, it could import English, American and local prototype components at wholesale rates, as required by members. Popular local prototype components could be manufactured, against definite orders from the members, and drawings available could be advertised.

Club layouts in this gauge are feasible, as has been shown by the Sydney Model Railway Society, and the portable layouts seen at exhibitions.

I should be very pleased then to hear how many "O" gauge modellers feel that the formation of such a society would be worthwhile.

J. HAMPSON.

Pennant Hills, N.S.W.

Sir,

I am not a member of the N.M.R.A., but I have been a rail fan and modeller for some years, and I would not miss out on my copy of your excellent magazine for anything.

I have been following with interest, the many tales of woe regarding the lack of Australian prototype, and my conclusions are that most modellers who are complaining, can, with a little common sense, obtain some models easily converted to our own prototypes. The G.E. 44 ton diesel comes to mind as the best for quick conversion. I am, in my opinion, a lousy all thumbs modeller, but with the aid of a close friend, I constructed two Clyde—G.M. "A" model locos by splicing three Athearn F7 bodies, (these can be obtained as shells), to make two locos, fitted them to Tenshodo 6 wheel bogies, Pittman motors, and painted one as N.S.W.G.R. 42 class, and one as V.R. S class.

Now if I can do it, so can anyone else. The Pocher or United Genoa 4-4-0, makes a beaut U105 class, and with the locos that have been offered by Model Dockyard in Melbourne, I think anyone

can have an Australian railway. Mr. Bill Coles in South Australia used to offer wood kits, but these same complaining modellers may have allowed him to go out of the field through lack of support by now.

Maybe this magazine could compile a list of all that is available or convertible, and then have an article on each one over a period of time. If this were done, maybe a great deal more interest would be generated in Australian modelling, and a few more home businesses launched.

Regarding Mr. Matthews' suggestion (see Mailbag Nov./Dec. 1966) my idea is that a manufacturer should offer only models that are in use on more than one system.

E.g. Clyde-G.M. A class N.S.W. 42
V.R. S
Comrails GM

For steam, probably the next most widely used loco was the A.S.G., but being narrow gauge it would be hard pressed for support. If offered, I for one would buy one and run it on TT track.

My suggested model — Plastic Clyde A model.

RONALD K. AUBREY.

R.A.A.F. Base, Laverton, Vic.

(Continued on page 24).

CATALOGUES AND BROCHURES

AVAILABLE POSTPAID — (U.S.

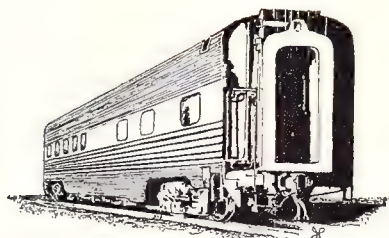
Kemtron #7, HO & HO _{N3} parts catalogue	Funds) \$1.10
Kemtron #7A, HO & HO _{N3} Loco & car kit, supplies & materials catalogue	1.15
Cal Scale Superdetailing parts brochure	.20
Cary Locomotive Works catalogue	.30
Varney 1001 parts catalogue (reprint) covering old equipment	1.10
Tyco parts catalogue	1.15
Lionel 1966 Train set catalogue	.40
LaBelle Woodworking Co. catalogue	.30
Roundhouse (Model Die Casting) catalogue	.60
Bowser Reference Manual	1.05
Penn Line Diesel & GG-1 repair parts lists	.40

We have repair parts for the above lines as well as complete kits. We will be happy to supply you with anything in model railroading normally sold through dealers in the U.S. If we don't have it, we will try to get it for you.

How to order — We require money with order — either a bank draft on any U.S. Bank or an International money order from your local post office. When ordering parts allow about 10% for postage. We pay ½ surface postage only. If you overpay, we will send you a credit to be used on future orders.

Dealer discount on Bowser and Varney products only.

Bowser
MANUFACTURING CO.



CLUB CAR

To Club Officers: These pages are available for the dissemination of news about your societies. Brief news about activities will be welcome for these pages. Closing date is fifteenth of month prior to month of issue

MELBOURNE MODEL RAILWAY SOCIETY,
Honorary Secretary E. Frost, P.O. Box
68 Boronia, Victoria, 3155. Club Room
80 Coppin St.

With its second year of life now completed the M.M.R.S. is letting itself "go". At a meeting of members on June 16, it was decided that the offer of new premises should be accepted and that the Society should move as soon as possible.

As the new premises have an area of 1668 as against 720 square feet you can see that great plans are in store for the Society. Unfortunately this will mean that for a while, probably about three months,

we shall not be able to allow any visitors, because we shall be too busy to accommodate them. We hope to be able to have "open house" anyway during the Christmas holidays so that the children can have a look.

Our new layout, if present plans go through, will be a rectangle 30 feet x 22 feet with a baseboard width of 5 feet on one of the longer sides and four feet on the other three. There will be a double main line along the exterior edge which will allow three trains up and three trains down at the same time, controlled by colour light signals. This will accommodate the members who like to run long trains. On the interior edge we shall have a "branch line" commencing from a large Junction station (through which the double main lines run) and running twice round the layout with four small stations with plenty of small sidings for the "operating" members. The branch line can be run separately to or at the same time as the double main line under different controllers.

The double main line will also allow us to run trains for the visitors' benefit without disturbing members who wish to operate or work on the layout. There is also talk of a suburban tram line in the street of the Junction town, with trolley buses along the main arterial roads and possible narrow gauge lines from one or two of the small branch stations. All these are possible but will most likely depend upon members interested enough to put them in and supply the necessary stock to run.

As a matter of interest we have had close on 200 visitors who have signed the "visitors" book since Easter 1966. We hope we shall have many more in our

new clubrooms in the future, as we feel that many possible future enthusiasts would enter the hobby once they can see just what can be done by the average chap.

CENTRAL COAST MODEL RAILWAY CLUB,
Hon. Sec., Kevin Ryan, C/- Commercial
Banking Co. of Sydney, Gosford, N.S.W.

Graham Williams and Kevin Ryan, both Central Coast Model Railway Club members, won the Eastern Division of the Southern Cross Model Railway Association's competition.

Graham's model was of N.S.W. FO platform ended suburban car.

Kevin's model was of N.S.W. BS steel corridor car.

These boys competed against some of the leading modellers in the Sydney area and their win is most creditable.

Meanwhile, the unsung workers of the club are quietly constructing the club's new layout which will compare favourably with those of many of the larger clubs in the area.

Kevin Ryan is chief designer in this Hawkesbury River station project and together with Ron Dawe, Frank Moore, Lionel Wallace, Graham Williams, Bill Cleary and Len Dodds.

The main base is almost completed.

Track laying should commence in another month.

Junior members are reminded to still attend sessions for running on the club's old layout as senior members attend every Thursday night.

Entries for the club's competition for a piece of N.S.W. scratch built rolling stock are due to close in the middle of June and it is expected they will be better than ever.

MAIL BAG (Cont.)

Sir,

Many readers and myself were pleased to see on page 26 of your May/June issue plans and details of early VR passenger carriages. None of the carriages mentioned are used in regular service and it has been a common sight to see modelers armed with tape measures and note books scaling precariously over these vehicles to obtain rough specifications when they are used on special excursions. I feel the information given in your last issue will be widely welcomed by readers.

All the ABL non-vestibuled stock has been written off. However, the ARHS has saved one, No. 45 which is being restored and is expected to have its first run again on October 1 to Euroa.

The 23 "V" carriages still in traffic are not used for ordinary services and now are utilised for the Vintage Train which runs on the first Sunday of each month. As a matter of interest, the two first class carriages with saloons, AV 23 and AV 32 (not 21 and 33 as was stated) are amongst eight "V" stock to be retained by the VR for use on the Vintage Train.

DONALD POTTS.

Ringwood East, Vic.

Sir,

Having been brought into contact with thermistors in my profession, I am wondering if readers have realised their potential in model railway control. I have certainly not seen their use described in the model railway literature.

There are many forms of thermistors,

but the type that would seem to have use in model railway control has the following properties. Essentially, they are resistors whose resistance varies with temperature. Hence when one is connected in a circuit, its initial resistance may be quite high, so limiting the current. But as the current continues to flow, the thermistor heats up in much the same way as the element of an electric fire does. This self heating causes the resistance to fall, and hence more current to flow.

They can thus be used as a 'halt' control. Instead of the more common bimetallic strip type switches. One length of rail is isolated, and one gap is bridged by a thermistor to the adjacent live rail of the next section. The section will be effectively dead when a locomotive runs onto it. The locomotive will consequently stop. However, a small current will flow, and in time will increase as explained above until eventually the train will start off again.

Another possible use would be in relay circuitry designed to operate flashing lights. A relay with a thermistor in series with the relay coil, one pair of contacts and a battery would switch on and off slowly, thus switching circuits connected to the other contacts.

Some care would be necessary in selecting the most appropriate thermistors, but the major electronic firms should be able to advise on the most suitable.

GUY DEVEREAUX.

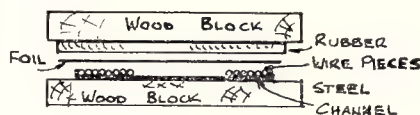
Ashfield, N.S.W.

Sir,

I read Mr. Hardaker's call for help regarding galvanised corrugated iron for his modelling. This is a method which I

have used for 30 years. Collect foil from cigarette packages, chocolate bars and, preferably, from tea boxes. Obtain some binding wire 0.050" thick. This is a very soft steel wire. Cut a piece a couple of yards long and fasten one end in a vice. Pull the other end firmly with a pair of pliers. This straightens the wire. Cut this into pieces about three or four inches long.

Bend a piece of steel or galvanised iron of about 16 gauge into a channel of about four inches long and two inches wide. Cement the wire pieces into this channel and when dry clean the surface. Glue the channel to a piece of hardwood. Cut a piece of rubber from an old tyre inner tube and glue to another piece of hardwood of similar size.



Now take a piece of foil, place it between the rubber and the channel and clamp it in your vice or between the faces of carpenters' clamps. Presto! Here is your piece of corrugation. A trace of oil on the form will improve the working. I build this way toolsheds and goods depots. All our club uses this method. When glued to suitable support the glue will prevent the corrugations being depressed by handling. Hoping I am of some help.

KONRAD PETER.

Cooma, N.S.W.



NOTES OF THE SYDNEY MODEL RAILWAY SOCIETY

General News

By the time members receive this copy of "Yardmaster" the Annual General Meeting will have been held and a new committee formed. Have you renewed your subscriptions for the coming year? \$4.00 City, \$1.60 country.

With the number of members turning up of late it just goes to show that members look forward each week to getting together to enjoy a common interest. There have also been quite a few visitors recently and your reporter from 'O' gauge has at least one phone call a week asking about the club in general. They have been told by someone, or read about it, so the club must be well known in some places.

'O' GAUGE NEWS

Your reporter of 'O' gauge has missed a few weeks owing to the fact that both his parents have had heart trouble and at the time of writing have been in hospital and it has been necessary to take time off from work to look after them. Hence no visits to the club.

John Davies has had his D57 Class Loco on the track and now this brings three such locos on the roster. Heavy motive power. Max Mitchell, a member of only a few weeks, has a very nice train of freelance and Western Australian cars and wagons. They bring colour to the layout. In 1969 we will see some of the rolling stock of W.A. running here to Sydney from the West, so the club is a little ahead of time. Very good Max.

Norm Read had his three truck Shay in again. Always an eye catcher this loco, with the motion of a Shay in full working order. At long last John Alexander has been able to carry on with the signalling and track circuits together making a start on replacing the wiring. The present wiring was placed in service when the club opened some 20-odd years ago and is now ready for rewiring. Good luck to you John. By the way, contact John to see if you can help him if you are this way inclined.

We still hear from our country members and I went to Tamworth on Anzac weekend to visit Jack Fitzpatrick, who lives there, for a Boy Scout showing and met quite a few model bugs, mainly in "HO", but each and every visitor was impressed by 'O' gauge, especially 'O' gauge Garratts. Jack is a live wire in the Tamworth area with model rails.

"HO" ACTIVITIES

April 24: When I arrived Dennis Sherring was under the base board as usual. This time putting in the offer and accept keys and lights from Junction Board to Glenvale Board. When most "HO" members were present, Frank Shennen moved a vote of thanks to Dennis for doing a fine job, to which we all heartily responded. During the operating of the layout it became obvious that the layout lacked a big turntable for turning long locos. The turntable would need to be about 16" long, so we are looking for a site on the layout where this could be conveniently located.

John Carter told me he will soon have the boxes to contain the timetable sheets which will be placed at operating positions on layout. I am looking forward to this night when the full scale layout timetables are announced by the Traffic Branch of the intention to run trains at these times, so the rest of the railway and public can plan accordingly — of course, if they are game. On the "HO" layout the timetable also will act as a standard of efficiency and as a goal to be aimed at. The efficiency of operations can be gauged by comparing one session with a similar session on the same timetable.

May 1: Dennis Sherring did a few finishing touches to Junction Board. We talked about the new track from return loop where it joins onto up main out of Wits End and the need to place a signal gantry over the three tracks at that point so as he could place signals to control movements of traffic from new track and Wits End. Ken Smith was at Central with Len Jansen helping him at car sidings and loco. Later on they switched places. Frank Shennen said he would have a go at Central Goods, with John Wheeler taking a liking to Glenvale. I was at Junction trying out the new control board, made a few blues but enjoyed driving the trains along the new track to Glenvale and return.

Before we could start operating we had to wait till Ken Smith and Dennis Sherring finished talking about how Dennis' Garratt had been fitted with a bigger motor and the new gears he had fitted. So when they had finished, Dennis went on to Wits End. John Glastonbury was in the Valley and we were all pleased to see him after a long absence. Barry Milner was at Plateau doing a fine job.

May 8: Barry is generally first into the club and I wish to take this opportunity to thank Barry for checking the batteries and cleaning track, so that we can all get away to a good start of operating the layout. I would say it was one of the best operating nights we have had for a long time, thanks to John Carter bringing in his timetable and the new boxes in which the timetable is on rollers.

The operating positions were occupied by John Carter, Central and car sidings. I was at loco, Len Jansen, Central Goods; Barry Milner, Junction; Ken Smith, Wits End; Arthur Wheatley, Glenvale; Frank Shennen, Plateau. After running through timetable which took 1½ hours standard time, scale time started at 7 and finished at 11.55, which totalled 5 hours, which means if we started at 7 p.m. we could run through schedule twice, or it could be extended to cover 10 hours scale time. We all congratulated John Carter and thanked him for all the time and effort he had put into planning and drawing up timetable and on how well it had worked out.

May 15: I was very impressed with John Huxtable's "TT" scale NSW's six wheel bogie passenger car, code TAM, which was nearly ready for assembling. The carriage body was beautifully made, better than any HO model I have seen. The roof ends, under carriage gear and bogies have been cast in rubber moulds. Frank Shennen has donated a nice looking gantry to be placed across new track on return loop where it runs parallel with up and down main lines from Wits End on which Dennis Sherring will place signals on to control traffic at this busy new junction.

NOTICE

Would Mr. Peter Clark of Roseville, New South Wales, please forward his full address to the Editor, as we are holding a letter to him from a reader.

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May 21: Dennis Sherring didn't waste any time installing new gantry signals at Wits End. These are interlocked with point switches on Wits End and Junction Boards. Barry Milner also fixed the short in Central Goods yard so he had the pleasure of operating the Goods yard for the rest of the evening. Arthur Wheatley was very busy painting new scenery at Glenvale which he had placed around new goods warehouse and over point motors in front of control board at which John Wheeler was in charge. When asked how things went during the evening he replied, "All right, except when Michelangelo wasn't getting in his way with his paint brush", referring to Arthur Wheatley painting scenery.

May 28: Bob Moffat was in to see us all but had to go early to catch his train back to the Blue Mountains. He said if he stayed he would have to catch the Mudgee Mail which was the end. Arthur Wheatley's painting of scenery and track looked very good. He makes up a mixture of colour dye and methylated spirits. During the evening Arthur was very busy glueing brick paper onto the wall at Glenvale on which he had drawn in black ink the shadows of brick arches which looked quite effective.

June 5: Really a bad night, wet and cold, so only a few turned up. Not enough to operate whole of layout so we didn't operate to timetable. Arthur Wheatley placed his NSW's T.F. class standard freight engine on tracks for a run, also his Victorian Railways Double Ended Clyde G.M. main line diesel. This was modified from the Tri-ang version and fitted with a six wheel bogie Tenshodo power unit. Arthur used the T.F. on shunting duties in Central Goods yard.

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EHO PASSENGER BRAKE VANS

Our Plan this issue features a commonly used brake van on the NSWGR. Drawn by Howard Armstrong the plan opposite may be compared with the two official photographs on this page. It will be noticed that the roof shape varies in the two cars shown. The upper van is fitted with the original 2AM type bogies whilst the other rides on 2AA bogies.

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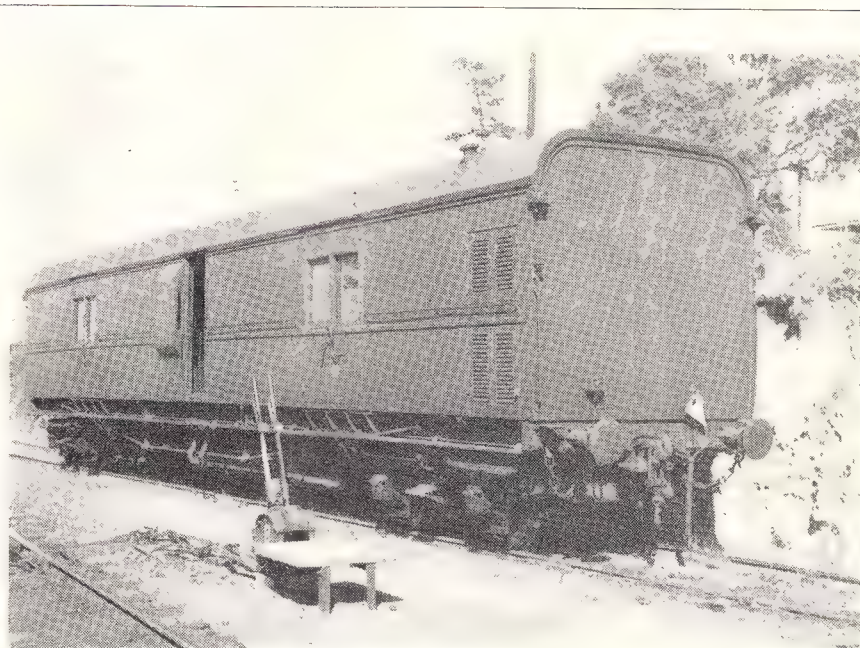
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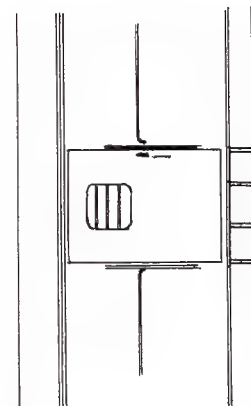
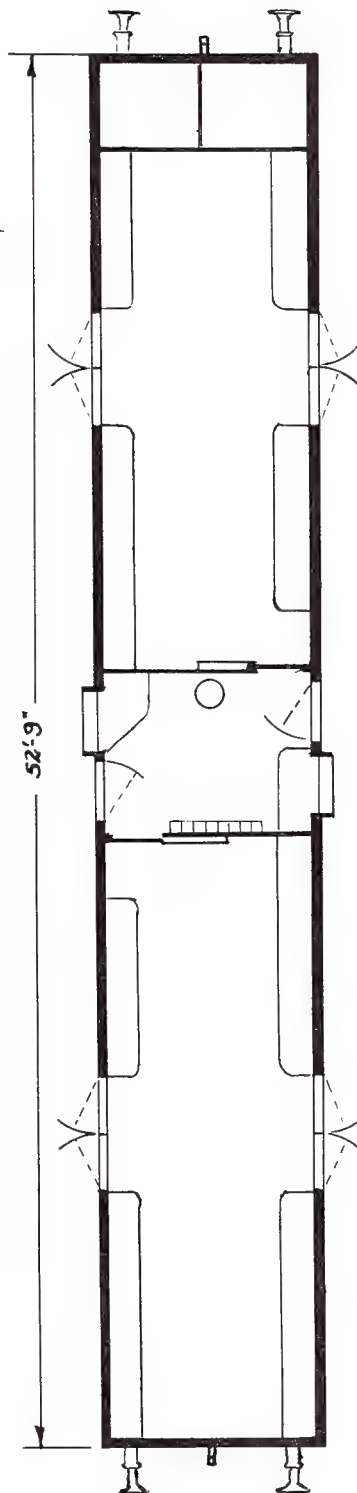
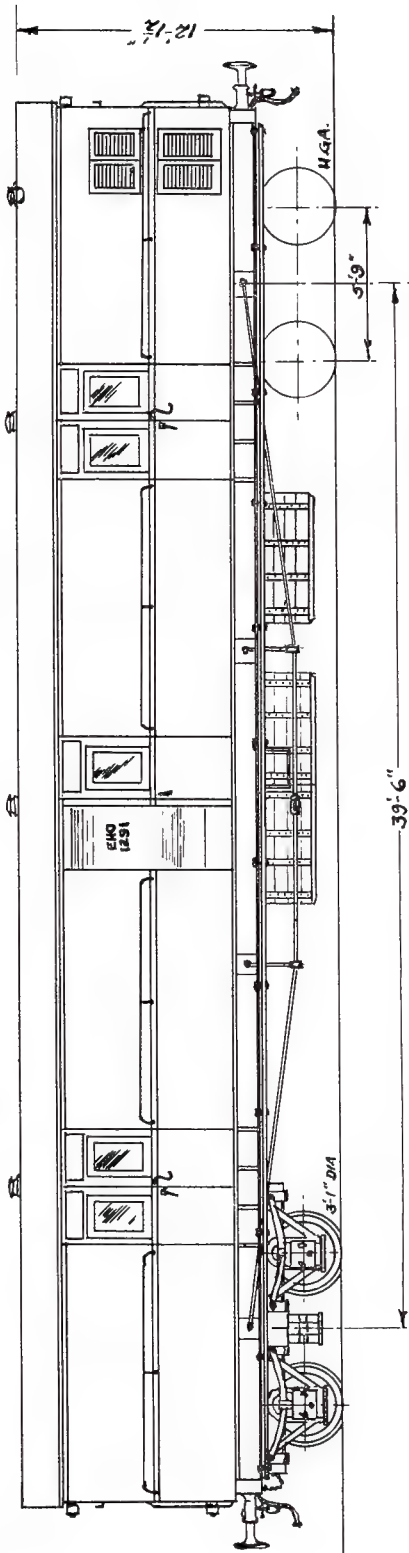
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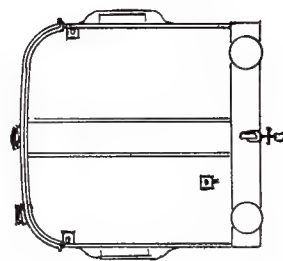
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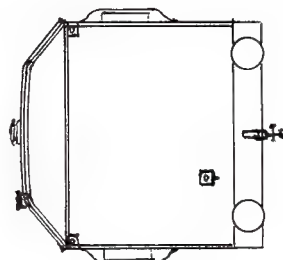




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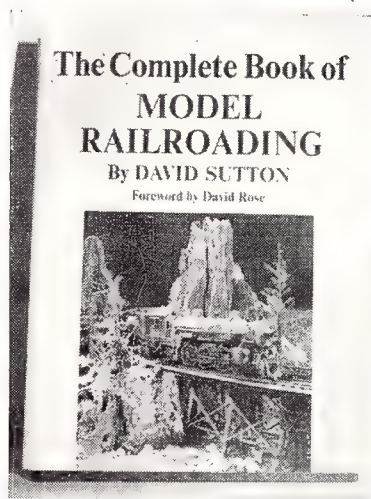
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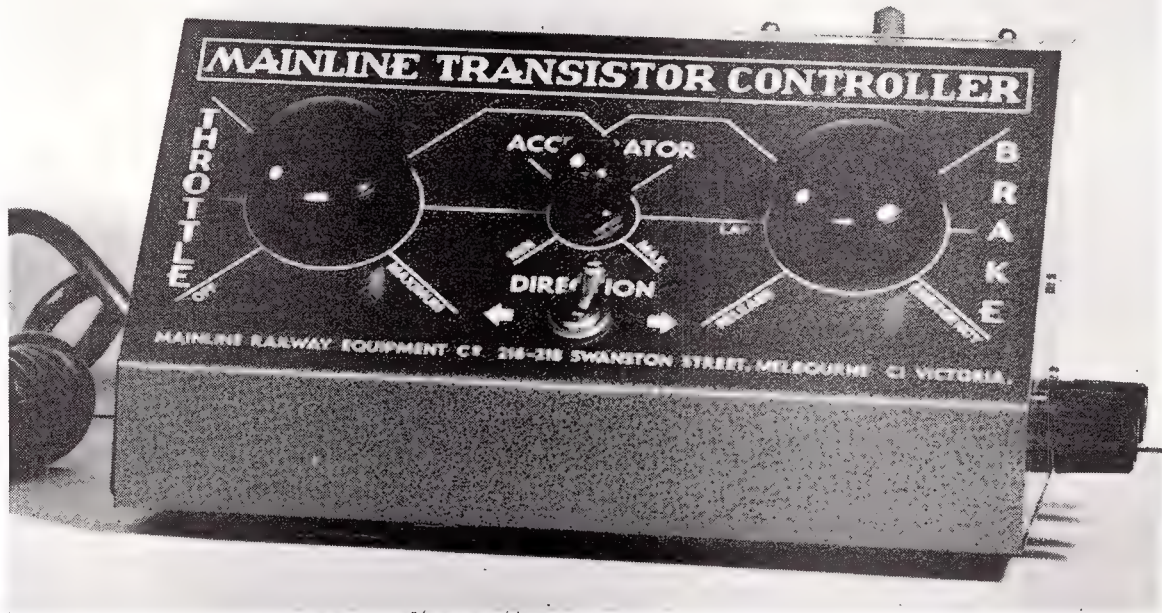
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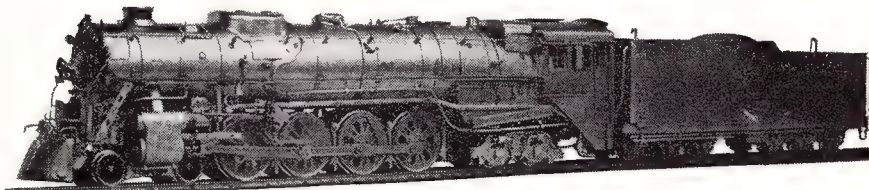
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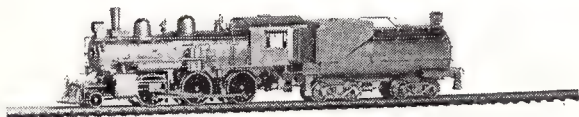
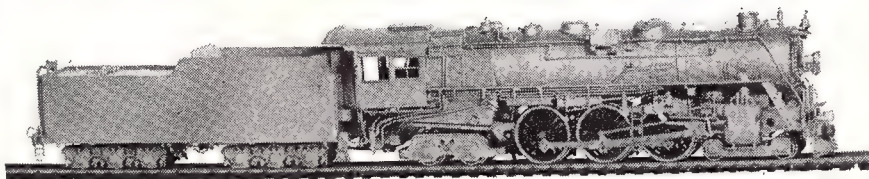
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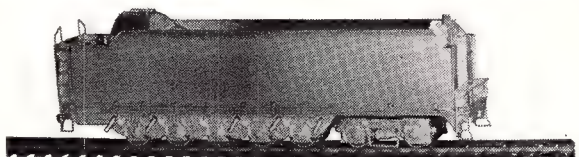
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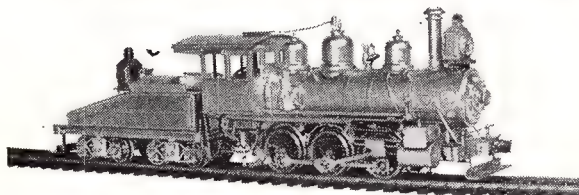
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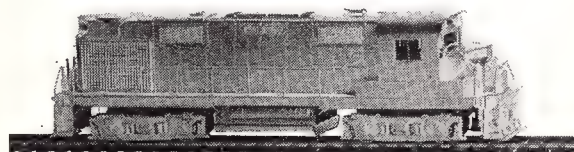


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'PT' CENTIPEDE TENDER: For those who have purchased the N.Y.C. 'J3a' Hudson or the recent 20th Century version (more of which are coming, along with the Empire State type), this long distance Tender has been specifically introduced. Raising the fuel capacity to 46 tons, as compared with the 28 tons of the standard 12-wheel Tender, these massive 14-wheel Tenders were substituted to cut fuel stops on fast runs. **Price: \$22.30.**



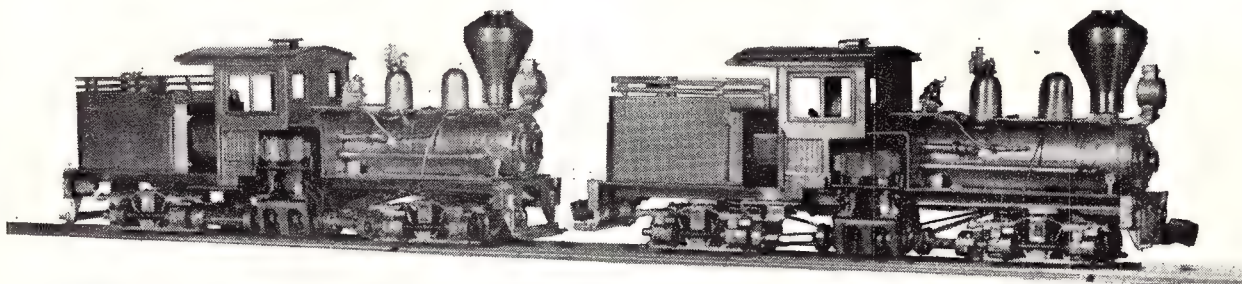
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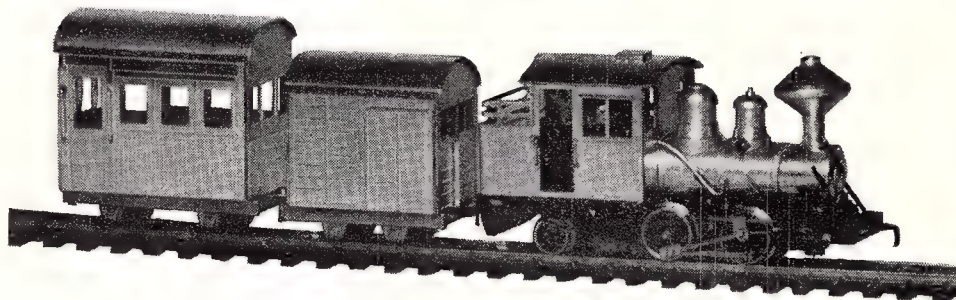
LITTLE "GIANTS" OF THE WOODS— FOR HO & HO_{n3} LOGGERS! . . .



CLASS "A" SHAY LOCO.: The Class "A", 20 ton Shay Locomotive was the smallest of the many variations of this design and is modelled here by Katsumi's master craftsmen with painstaking fidelity to scale and detail, and with many fine investment castings. Unpainted, ready-to-run. Length, 4½". Weight, 6oz. Price: HO, \$68.40; HO_{n3}, \$69.60.

NOW THE DIMINUTIVE HO_{n3} 'MIXED'— FOR EXTRA REVENUE SERVICE ON THE LOGGING ROAD

HO_{n3} MIXED TRAIN: Kumata's latest contribution for sharp 'mill management', the Baldwin 0-4-2T, replete with freight and passenger accommodation in the rear! Measuring but 6" overall, this Train provides the answer for extra revenue service, or for servicing the road and needs of the staff. Unpainted, ready-to-run. Price: Loco., \$16.95; Freight or Passenger Car, \$2.60 each.



Other News from "THE DOCKYARD" . . .

Following on the release of our new OO/HO Price List, we are now pleased to be able to announce that the new 'O' Gauge Price List is also available. Copies of the latter will be supplied upon receipt of a large stamped S.A.E. . . .

The full range of B.P.R. Castings is again available in both 'O' and 'HO' scales. Full details as per our new Price Lists . . . The excellent range of 'O' gauge locomotives and rolling stock now available will shortly be expanded with the arrival of the following items: P.R.R. 'K-4' Pacific at \$228.55, B. & O. 0-4-0T 'Docksider' at \$72.50, ACF Welded Triple Hopper (less trucks) at \$20.95 and 40' Plug Door Reefer (less trucks) at \$24.00. For full details of all our 'O' gauge brass locomotives and rolling stock, send a large, stamped S.A.E. . . . First stocks of Balboa's new 1967/68 Catalogue are now available at \$1.20. Try your nearest outlet for HO/HO_{n3} brass loco. imports for your copy . . .

The popularity of Shinohara's HO Code 70 track continues to grow and a further milestone in this range is the introduction of the No. 8 Turnout at \$3.10 ea. Now all popular angles of 4, 6 and 8

are available in Points, as well as Flexible Track in meter lengths and Diamond Crossings in 30, 45, 60 and 90 degree angles . . . Good news for narrow gaugers in HO_{n3}! — More 'Minitrains' Baldwin 0-4-0T Loco. and Plymouth Diesel will be available from all our outlets by the time this appears in print (see our March/April ad.), along with an interesting assortment of dump trucks. Also, our first stocks of the Decauville 0-4-0T Loco. at \$6.50, Tip Trucks at \$1.70 per pair, Bogie Logging Wagon at \$1.70 and bogie Passenger Car — a delightful cross bench, open 'toast rack' — at \$2.50 each.

Although badly delayed, the Pocher HO 2-4-0 "BOWKER" is now available at \$31.85.

Replenishments are just in from Model Engineering Works, but we regret some price increases are necessary and reflect the higher U.S. prices recently introduced by MEW . . . Recent arrivals from 'United' include our first stocks of the new 4 cylinder Vulcan 50 ton Duplex Locomotive at \$80.50. To come soon will be the new 'Fujiyama' A. & L. M. 4-6-0's . . . 4-4-0's are seldom offered, but just in from

Olympia is the fine P.R.R. 'D-16' at \$62.55.

Scheduled to leave shortly for a return visit to our various suppliers in Japan, this may be our last opportunity to disseminate news via the 'track phone', before the end of the year. Accordingly, several advanced items of news should be mentioned at this juncture: In O gauge, Katsumi's plans, running into 1968, include more U.P. 4-8-8-4 "Big Boy" at \$430.00; the N.Y.C. 'J3a' Hudson, in Streamlined, De-streamlined and Conventional versions, at \$250.00 each; NKP 2-8-4, C. & O. 2-8-4 and N.Y.C. 4-8-4.

O gaugers are also promised more rolling stock, as well as repeat production of many brass cars we are now low or out of. 'United', not normally associated with O gauge, are presently manufacturing a ¼" scale USRA 4-8-2 and this should be available shortly, to further the excellent range of 'King Gauge' equipment now available and coming . . . In HO, Katsumi have a fine production schedule prepared, mainly in conjunction with Balboa Scale Models. Locomotives to be manufactured include — S.P. 'C-9'

(Cont. on page 10)

THE AUSTRALASIAN MODEL RAILROAD MAGAZINE

Vol. 3, No. 28, SEPT./OCT., 1967

AUSTRALIA'S LEADING MODEL RAILWAY MAGAZINE

THE OFFICIAL JOURNAL OF NMRA IN AUSTRALASIA
Incorporating THE YARDMASTER, The Bulletin of the Sydney Model
Railway Society.

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TECHNICAL BULLETINS

To all members and other interested
modellers of Australasian Railway Prototype.

The Executive Committee of the Engineer-
ing Department would like to obtain the
help of everyone in Australia and New
Zealand to aid with technical information
which can be used to advance the model-
ling of the Australasian scene (in all cases
where the 'Australasian' or similar is used
we include every Australian State, Com-
monwealth Railways, and the New Zealand
System). We want, and need all types of
drawings, photos and sketches of all things
used in our railways.

We want you to study the NMRA 'Data
Sheets', and use these as a guide. As an
example, we would like a Brisbane mem-
ber to photograph the 'Bridge' between
Bald Hills and Strathpine, and if possible
give us approximate measurements. In Vic-
toria, there are many bridges and culverts,
cuttings and fills which have distinctive
Australasian characteristics.

As time goes on your Council hopes
to get technical information on locomotives
and rollingstock, so that Technical Bulletins
may be made and issued to all our mem-
bers and to those societies and clubs which
join us as members.

To assist in the gathering of this tech-
nical information, we give you the subjects
which can be sent, and where any dimen-
sion or measurement is given please use
a scale of twelve (12") inches to the foot.

*Rail; Coupling Methods; All Signs; Sig-
nals and their location (particular uses);
Safety Appliances; Goods Wagons; Pas-
senger Coaches; Bogie Designs and Con-
struction; Wheel Sizes and Design; Station
Buildings and other Lineside Structures;
Bridges; Trestles and all similar features;
Retaining Walls, and any other Civil En-
gineering Structures; Pantographs; Trees
and Shrubs (use Data Sheets D 2A, a1,
a2, a3 as a guide).*

Send all this information to The Chair-
man, Engineering Committee, 13/11 Croy-
don Street, Lakemba, N.S.W. 2195.

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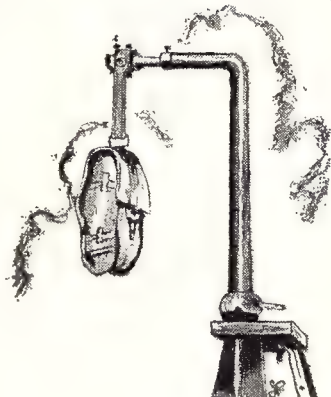
NEXT ISSUE CLOSES:

15th OCTOBER

On the Cover...

Ralph W. Holden works at his
Bench on the bogies of an S.A.R.
870 class diesel. An article on his
model of the Eyre Peninsula Lines
appears on page 16.

MAIL BAG



Sir,

The New Zealand Model Railway Guild (formerly Association) is at present organising the second New Zealand Model Railway Convention to be held in Auckland from April 12-15 inclusive (Easter), 1968.

We have received over 300 postcards in response to our first Convention Newsletter and can thank the highly successful Convention held in Wellington in 1966 for much of our publicity. There will be layout visits — modelling clinics — lectures — films — live steam meet — model competitions — ample display space. It should be well worth attending. If any New Zealanders have not received any notification or there are any visitors from overseas, who will be in New Zealand at this time, then just write your name and address on a postcard and mail to:

The Convention Secretary, New Zealand Model Railway Guild, 18 Fergusson Ave., Auckland 3, New Zealand.

This will not be a definite booking, but will put you on our mailing list for Newsletters. Full Registration Forms for those interested will be sent out prior to Christmas.

ALAN J. CURTIS,
Chairman,
Publicity Committee.

Sir,

I was pleased to see in the last issue of AMRM the article on Pullabooka Railway yard. Could the author please supply some sketches approximately to scale of the station building, and some idea of the typical Australian water tank he mentioned. I personally have approached the NSWRR for railway yard layouts, diagrams of railway buildings, and dimensions of semaphore signals for modelling purposes, but have been told that for security reasons, this type of information cannot be made available. Despite this attitude of the NSWRR, I have been able to obtain diagrams from the other Australian systems, and have seen diagrams of NSW railway yards in other publications readily available at bookstalls and libraries. Finally, I must add that the last issue of the AMRM was very good. The number and variety of the articles was a definite improvement on previous issues.

R. JONES.
Campbelltown, N.S.W. 2560.

Sir,

Re Steven Morris' comments on prototype track layouts, A.M.R.M. July/August, as a regular feature, I would like to say I think it would be a very good idea, but I would add, if the person submitting track plans for publication could briefly give train movements at the location.

J. MCGREGOR.
Cheepie, Qld. 4475.

Sir,

First let me compliment you on a fine magazine, it carries some very interesting articles.

Would it be possible to print an article on stud contact. I have quite a lot of 3-rail equipment and would lose far too much by selling it and a few ideas for stud contact would be a great help.

R. QUINN.
Berowra, 2081.

Ed. Note: Now here's a chance for some would-be author who's interested in stud contact to produce an article for readers who are interested in this system.

Sir,

I was surprised to see on the cover of the May-June issue of the A.M.R.M. the new symbol of the Southern Cross Model Railway Association. However, I was horrified to see that the symbol had been altered by the addition of a pentagon bearing the words "Southern Cross Model Railway Association".

The original symbol devised by Peter Woolley consisted of an S on a C and was intended to stand out as an unusual design, to promote inquiries about its meaning and to symbolise a go-ahead and modern organisation. Similar ideas have been used by Canadian National and British Rail, neither of which, I note, consider it necessary to spell out their names in full. I cannot understand why the Association's committee should find it necessary to add to this design, perhaps this is symbolic of the committee, to add only encumbrances to a good idea. I hope for the Association's sake that this is not so.

Hoping to see the original symbol on the next issue.

JOHN J. BEVAN.
Edgecliff, N.S.W. 2027.

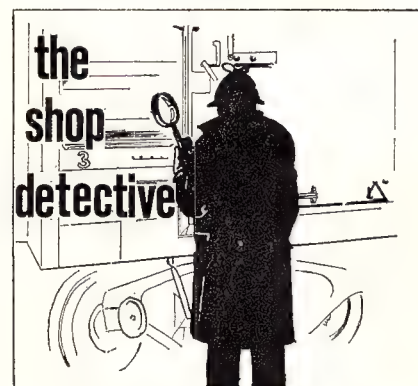
Sir,

I very much enjoy reading your wonderful magazine. You are doing a great job.

Although I have been interested in model railroading for several years, I would be absolutely lost if I were put in the cockpit of a locomotive and told to get it going. Would it be possible to write some articles explaining what makes the steam, diesel and electric locos tick, with a fair list of technical detail. Perhaps it could be written in a form where the writer takes the reader on a short trip from one station to the next.

I would also be interested to know a bit more about signals, what they mean and how they work. I'm sure there will be others also interested in the above subjects and who are also not yet experts.

W. M. SECKER.
Cheltenham, Vic.



At Ham Radio Supplies, 323 Elizabeth Street, Melbourne, several types of electrical switches including small slide switches at 15c and 20c each. Also 100 yard reels of plastic covered bell wire at \$1.00 per reel.

Melbourne Sports Depot will have moved to their new address, 123 Elizabeth Street, by the time you read these notes. At the time of writing they are showing a large range of Rapido (flea scale) equipment.

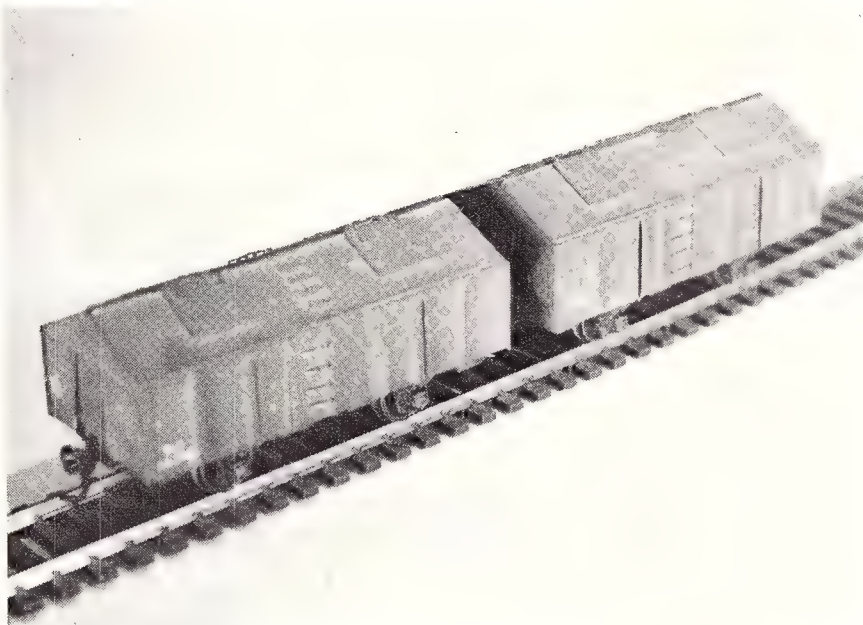
All at the Model Dockyard are 4mm. scale posters, HO platform equipment — chocolate machines, weighing machines, milk cans, MEW derail sets. I hear that the 'Galloping Goose' HO N3, D & R G W prototype will shortly arrive at the 'Dockyard'. Also, in HO, EMD 'E9' A & B units and Alco-GE 'U50' hoods, twin matched motors, unpainted, RTR, could be available when this issue hits the stands. Egger-Bahn catalogues and price list are available from 'Dockyard' at 35c posted.

Austral Modelcraft (please note their new address), 101 Laura Street, Ekibin, Qld., 4121, have produced sheets of N scale weatherboard, which are just the thing for modelling Australian prototype buildings. We have found that a very light sanding on the face of these boards will produce excellent 3" louvres for HO scale. Write for a sample.

REPRINTING OF ISSUE NUMBER ONE

Requests for reprints of our first issue are still being received, but insufficient for printing to commence. Readers are earnestly requested to consider ordering this copy as even reprints will be considered as collectors' items in the near future as they should be indistinguishable from the original. In the meantime, all orders which have been received have been recorded until distribution begins.

SCRATCH BUILD THIS RU BULK WHEAT HOPPER



One of the problems facing the modeller is to try and fit a typical prototype scene into a confined space. This usually means building short sidings and operating short trains. By using the shorter four wheeled wagons the layout can be made to appear much larger as there are more wagons per foot of track and thus a short train looks typical.

Don't be deceived into thinking that a small four-wheel wagon is any easier to build than the larger bogie stock. The 'RU' described in this article requires over 150 individual parts to complete the construction. However, don't let this frighten you off building this somewhat unusual wagon.

Before commencing to build any piece of rollingstock, it is worth considering how many you will require as it is much easier to make the various parts at the same time rather than build each wagon individually. There is very little difference in the time required to make one or six parts if they are done at the same time. It is not necessary to assemble all the wagons at the same time as the extra parts can be put to one side to be assembled at a later date and knowing that the wagons will turn out the same as the original.

Prototype Details

With the introduction of Bulk Wheat Handling methods throughout the wheat areas of the State, the Department introduced a new series of four-wheel wagons to handle grain in bulk. All wagons in the series are 22 feet over headstocks and have 11' 6" axle centres. The 'RU' has a pitched steel roof with four loading hatches and eight dis-

charge doors in the floor. Six hundred and fifty-one 'RU's' were built. The odd one is coded L422 and is used for supplying sand to the Port Waratah Loco Depot. The other numbers are as follows: 24100-24349, 24450-24599, and 25100-25349 inclusive.

ANOTHER

NSWR

PROTOTYPE ARTICLE BY HOWARD G. ARMSTRONG

Materials

- 1 1 3/16" x 5/32" dressed softwood.
- 1 sheet pasteboard 8-ply.
- 1 sheet pasteboard 2-ply.
- 2 pairs of 10.5 mm wheels on axles.
- 4 PBR axleboxes.
- 10 3/8" x 00 countersunk wood-screws.
- 2 couplings.
- 1 length of fine wire.
- 1 sheet of balsa 1/16" thick.

Your newsagent should be able to supply you with the pasteboard. I used Central Valley wheels and PBR axleboxes from The Model Dockyard in Melbourne.

Construction

We commence construction by making the floor and fitting the running gear and underfloor details to it. The floor is cut from a piece of thin softwood, 73 mm x 30 mm as shown in Fig. 1. Mark out the centre lines as shown. The axle boxes are then drilled to take the 3/8" x 00 screws. Care-

fully locate each axlebox on the axle centre line with the inside face on the solid line. Drill and screw into place. Tighten screws after slipping axle into position and checking that axle turns quite freely. If not, remove axleboxes and deepen axleholes slightly until free.

From a piece of 1/16" balsa cut two (11 1/2 mm x 11 1/2 mm) coupler mounting blocks, one centre beam (53 mm x 5 mm) and sixteen (9 mm x 9 mm) for the hoppers. A piece of 2-ply card (53 mm x 4 mm) makes the web on the centre beam. The hopper doors are made from 1/16" balsa (9 mm x 9 mm) with the edges chamfered to 45 degrees.

Fit couplings, I used Kadee MKD5 and 10 and fitted them using 3/8" x 00 screws. Don't forget to allow for the thickness of material to make the ends. Give the wagon a test run to see if any extra weight is required (I find a finished weight of 1 1/2 ozs. to 1 3/4 ozs. ideal for 4-wheel wagons) and to check couplings for the correct height above rail.

Mark out the required number of sides, Fig. 2; ends, Fig. 4 and roof Fig. 3 on the 8-ply card. I have shown the location of details on plan as it is much easier to locate ribbing, ladders, etc., at this stage rather than after the wagon has been assembled. Cut out the parts, using a sharp knife and a steel rule as a straight edge.

Commence assembly by gluing the two sides to the floor so that their lower edge is 11 mm above the rail. I use Aquadhere P.V.C. glue and find it ideal for card, wood, etc.

Glue ends into position with lower edge flush with sides. This should place the top edges below the sides by the thickness of the roof. The couplings should be removed before fitting the ends. To allow roof to bend to correct shape, run a sharp knife along the dotted lines each side of the centre. Turn card over and place rule along groove and bend card up carefully until roof takes approximate shape.

Before gluing roof into place, check to see that it fits snugly between sides and fits down onto the ends. It may be necessary to remove a small piece from each side.

From a piece of 2-ply pasteboard cut out the four loading doors, Fig. 5. Also cut out four other pieces 1 mm smaller all round. Glue these to the doors and when dry glue to roof. Note on plan that doors do not quite touch at the top.

We now commence adding the details. These either make or mar a model so proceed carefully and don't be afraid to scrap it and start again if you are not satisfied. I find that photographic paper is excellent for making the fine details such as angles, hinges, etc.

I make the angles for the corners from a single piece of card, creasing it down the centre with a knife before bending. The angle and channels along the sides are made from two pieces.



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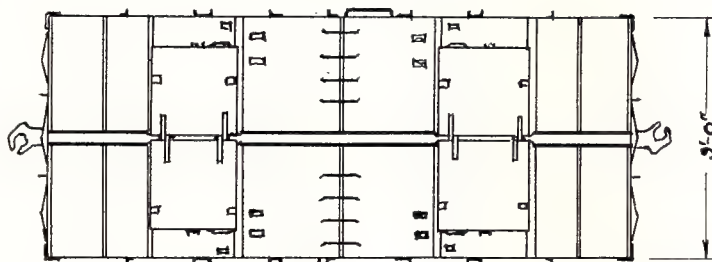
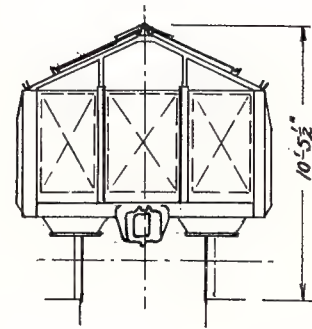
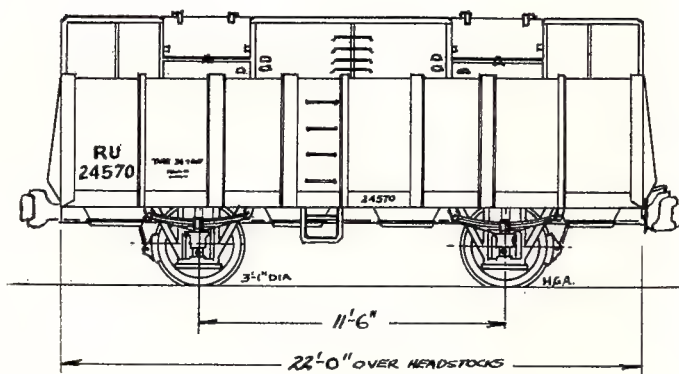
Send 4c stamp for full list of Australian and overseas books on railways, tramways, and road transport.

Note that the top and bottom edges are chamfered. The four angles on the ends are tapered to cover their full length. The door hinges were also made from card and their ends were slipped under the edge of the opposite door.

The diamond shaped pressings on the ends are shaped out of 1/16" balsa. Cut out rectangles to the size required and then draw the diagonals between corners. With a sharp razor blade and using the lines as guides, carefully shave the balsa block until it is the required shape. I found that it took quite a few attempts before I had six good enough to use.

The ribbing along the pitch of the roof is made out of photographic paper and is glued into the groove made when bending the roof.

I used Black Diamond Steel Guitar wire (2nd) for the ladder rungs. A simple method for accurately bending the rungs so they are all the same size is to use a pair of narrow nosed pliers. Mark the side of the jaws where their width is the same as the inside measurement of the rung. Bend wire to a right angle about 1/4" from the end, place



CAPACITY :- 24 TONS
TARE :- 10 T. 18 C. 19

N.S.W.G.R.

HOPPER WAGON

CODE: RU

Drawn	HGA.
Date	Aug 65
Nº	GK

Scale 3.5mm = 1 foot

across jaw on mark and bend again, making sure both legs are in line. Cut off long leg and the rung is ready to be glued in position.

Before painting, I strongly recommend giving your model a couple of coats of Shellac to preserve the card. It also stiffens the card so it will stand handling much better.

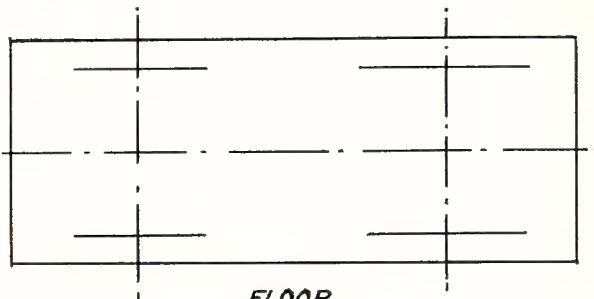
Although the wagons were originally

painted black, they soon have a dull greyish appearance and in some cases a rusty finish. I mixed white undercoat and Humbrol Gloss Black until I had the desired colour. Paint some scraps and let it dry before tackling your wagon. Use a clean brush and work the paint well. It is much better to give it a couple of coats rather than trying to cover it with one.

The code and number is white and is placed on the lower left hand corner on both sides.

With a few 'RU's' around you will now need some industries for their use, so how about a wheat silo or a Feed Merchant's Warehouse?

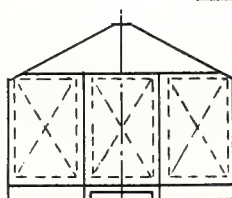
Let's see some photos of your models in the "Scenic Route".



FLOOR
FIG 1



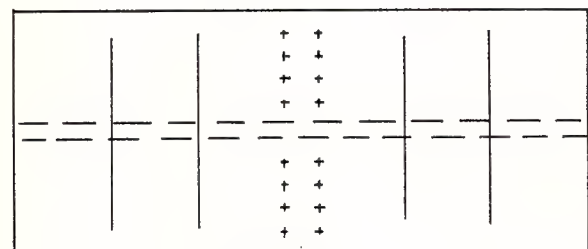
SIDE FIG 2



END
FIG 4



HATCH COVER
FIG 5



ROOF FIG 3

'RU' HOPPER WAGON DETAILS

HGA.

In 1963 the Victorian Railways 'Y' Class No. 108 was retired after covering many thousands of miles. It operated for 74 years in various guises — mainline passenger hauling initially, later branch line mixed goods, and second class passenger movements, finally helper service at Bacchus Marsh, then shunting at Spencer Street. The story of other "D's" was similar.

Similarly the 'D3' class survived many a refit — new boilers, improved valve gear, raised boiler pressure, higher speeds, fitting of air compressors, all occurred during their working life.

The most famous of early steam locomotives, built by George Stephenson, was the Rocket. It incorporated original patents for valve gear, water injection, sprung frame, and boiler layout.

The first loco driver of the Rocket was Edward Entwistle and in his later years, living in Iowa, U.S.A., he wrote:

"I am sure that if I could handle the Rocket now, I could get up steam and run another trip, because she is an honestly made engine, and, you see, she has been resting for a long time, and is not worn out with work.

"Even now, getting on towards my hundredth year, I look back with pride on the days when I was so closely associated with Stephenson and his wonderful locomotive. I have lived to see amazing changes and improvements. Look at these noble specimens on the walls here — a photograph of one of the most modern and powerful American type, with four cylinders and all the rest of it; then come a yard or two further and examine this old print of the quaint, crude Rocket. Why it is almost like evolving a highly civilised man from some simple type of animal".

LOCOMOTIVE DEVELOPMENT

By IAN G. PETHERICK

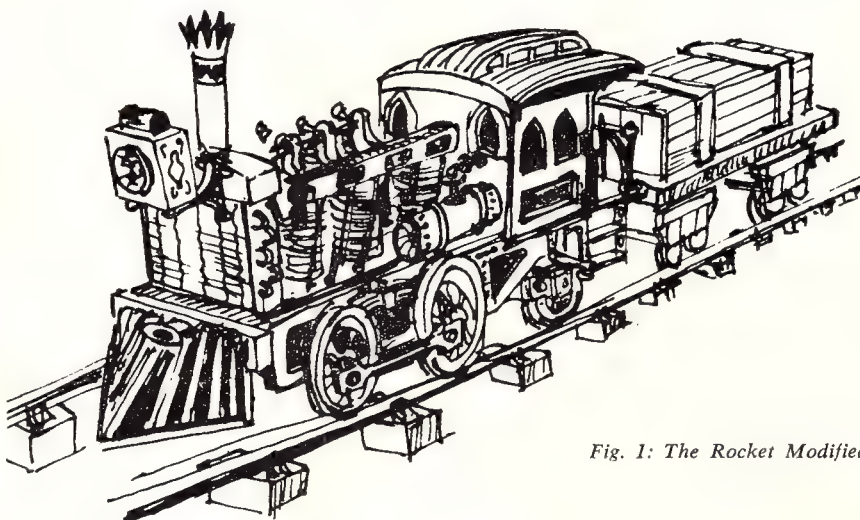


Fig. 1: The Rocket Modified.

And what improvements Stephenson would have made, given longer time to see the development of Westinghouse air brakes, requiring air compressors, Elesco feed water heaters, Baker valve gear, vauclain compound engines, fuel oil-fired boilers, mechanical dampers and improved grates, blow-downs, etc.

Figure 1 shows how such a refit would look. Much added plumbing is evident.

A successful model could be built from either the Airfix (Kitmaster) or Tri-ang 'Rockets'. It would appear easier to power the loco by a tender-mounted motor driving the tender wheels.

For detailing, using Kemtron parts the following are required:

X 189	1	Bell and bracket
X 222	2	Brake shoes
X 224	1	Air piston for bell operation
X 96	2	Steam blow-downs
X 154	2	Individual cylinders
X 6A	2	Crossheads
X 214	3	Sets steam fittings
HO TR 3	1	Headlight or altern. M7 Headlight
M 26B	1	Tool box
M 8A	1	Smoke box front
X 295	6	Globe valves
X 258	4	Hoses
And for tender:		
X 132	6	Old style journals
X 382	1	Breather stack
BR 16	1	Air tank.

Other News from "THE DOCKYARD" ...

(Cont. from page 4)

2-8-0, S.P. 'SE-4' 0-8-0, S.P. (repeat) 0-6-0, S.P. 'MK-5' Mikado (Pacific Coast Version), U.P. 'MK-6' Mikado (Master Series — limited production), S.P. 'AC-12' Cab Forward and painted Alco-G.E. 2000 h.p. (P.A.1 ordinary type) 'A' and 'B' units. Also, a special run of full length, painted streamlined passenger cars is included in the schedule. These will come in sets (Baggage, Coach, Sleeper, Dinner, Vista Dome and Observation), finished with trucks. Heralds and prices will be as follows: S.P. 'Daylight' and G.N.: \$102.00 per set. S.P. Aluminium and U.P.: \$100.00 per set.

By the time this appears in print, Kumata will have supplied the HO3 Mack-Brill Rail Motor at \$18.90, the HO Pacific Electric 1299 Business Car at \$32.50, HO U.P. 'Wood' Caboose (less trucks) at \$12.75, G.E. 'U-50' "Cab Forward" (twin motored) Diesel at \$70.00 and EMD 'E-9' Diesel 'A' and 'B' Units. Like the 'U-50', both the 'A' and 'B' Units will be twin motored with high efficiency, low drain motors, giving the advantage of 4-motors in parallel, when coupled. Prices for the 'A' and 'B' Units will be \$57.85 and \$56.25 each, respec-

tively. The following shipment will include Balboa's HO3 Rio Grande Southern 'Galloping Goose', in three versions: 3-Truck Freight, 3-Truck Passenger and 2-Truck Freight. All will be dressed in fine American castings and at \$40.00 and \$37.50 each, for the 3-Truck and 2-Truck models, respectively, will sell for practically the same price as in the U.S.A.!

From Tenshodo, services are expected to improve now that 'Dockyard' have been appointed sole Australian Agent and importer. Scheduled for delivery about the middle of September will come more 0-6-0 Baldwin Tank at \$16.00; S.F., U.P., G.N. and Burlington GP-35 Diesels at \$53.00 each; G.N. 'F-9' 'A' and 'B' Diesel Units at \$60.00 per pair and G.N. 'SD-24' Diesels at \$51.00 each. A very few 4-8-4 U.P. 'Big Boy's' will also be available at \$250.00. Future production will include: G.N. 'S-1' 4-8-4, G.N. 0-8-0, G.N. 'F-8' 2-8-0, R.I. 0-8-0, G.N. 'P-2' 4-8-2, G.N. 'R-2' 2-8-2 and G.N. 'N-3' 2-8-0.

In N scale, Sekisui's new range of U.S. prototype freight rolling stock has been hailed for its peerless quality. All items should be available about the end of August; details and prices as per our Sekisui Price List.

By way of a 'special' for the final item, a very few painted V.R. 'R' Class Hudson Loco. will be to hand in early September. These are surplus to the stock which we made up for Europe and while they last, will be available for \$82.00.

STOP PRESS: The balance of the "Northeastern" range is now in stock! All formed wood car roof and floor sections, sills, scribed panels etc. Prices are the same as in the U.S.A. and by the time this appears in print, we will have a printed catalogue sheet available for the price of a large, stamped, S.A.E..

More American OO-90, O-80, 1-72 and 2-56 taps and dies and hex. brass nuts and bolts are now in stock. For details and prices, see our Model Engineers' Price List, available at 15c.

New Roundhouse HO stocks include the outstanding, new Pullman Palace Car (compartment sleeper) at \$9.40, less trucks. Two other new Roundhouse items are the R.H. Sand and Gravel Hopper Kit with operating doors and the Wood Sheath Box Car Kit. Both come with trucks, the former, in C.P.R. and St. L. & S.W. at \$10.10 each and the latter, in U.P. and D.L. & W. at \$9.40 each.

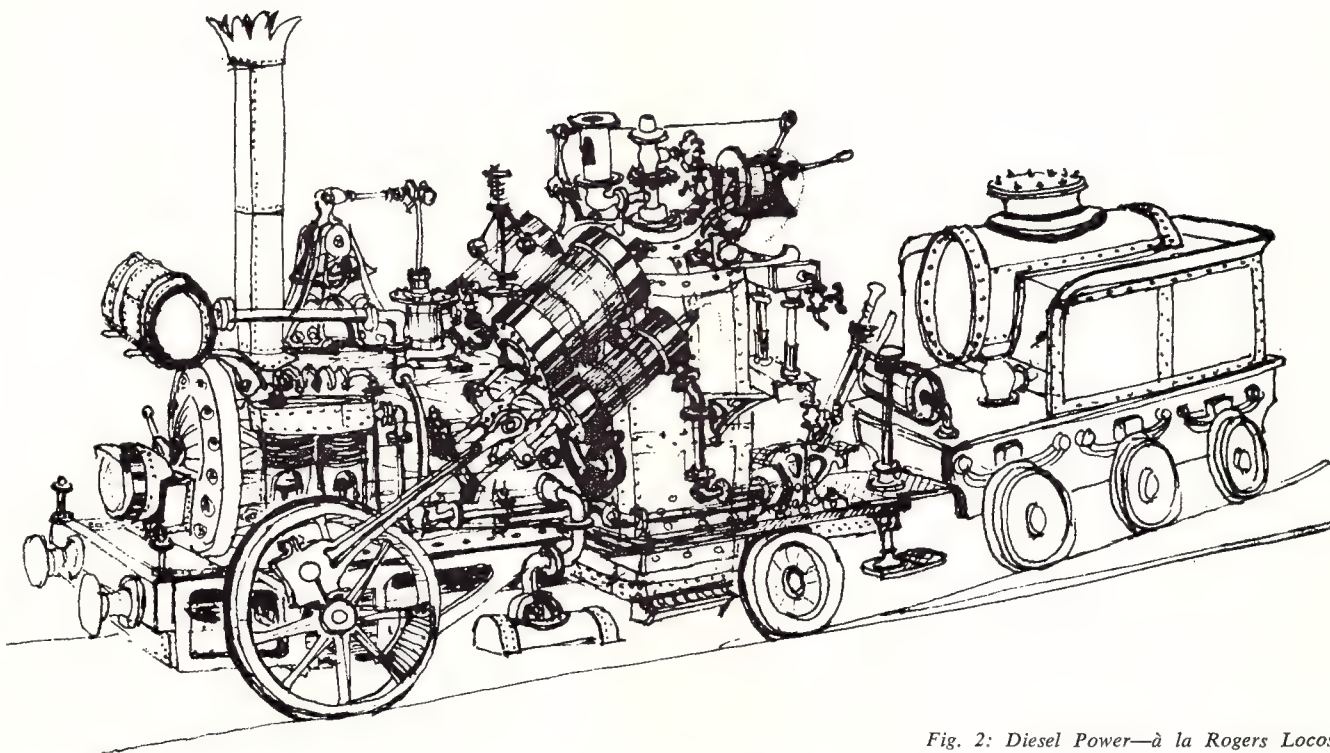


Fig. 2: Diesel Power—à la Rogers Locos.

Together with nuts and bolts combinations, air compressor, feed water heater, wheels, axles and sundry "junk".

For any really experienced loco builder this should be a normally difficult project. It is not recommended for beginners.

Several details need comment. The original stack being such a distinctive feature must be retained; and for

character no true enthusiast would consider, would not allow in fact, any alteration to the open cabless footplate. Remaining open to the weather offers no problem; the 'Rocket' will run only on public holidays, weather permitting.

The tender is best constructed from scratch, using tinplate. Assembly is by finger pressure and solder.

With the interest raised by the de-

velopment of a modernised 'Rocket', it was soon realised why the prototype did not eventuate. In 1892, the Diesel engine was patented by Herr Rudolph Diesel. Now had this been immediately taken up by Baldwin, or say Rogers Locomotive Works, what then?

The accompanying figure 2 is one suggestion.

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BUILDING FOUR-WHEELED OPEN WAGONS

By R. P. DUNN

Most goods stock on Australian Railways consist of a large percentage of four wheeled open wagons, therefore you will need a few on your layout. Although this article is describing how to construct Victorian "GY" or "RY" wagons with slight modifications, it can be changed to suit vehicles of other States.

I have used tinplate for construction of my wagons; brass can also be used, but why go to the expense of brass when a few opened out tin cans or a trip to a "can" manufacturer for off-cuts will do. Tinplate or brass of .010" or .012" thickness is ideal.

First of all you need a few 'photos of the vehicle you going to build as well as a few dimensions. A scale drawing is not really essential, but a help. If you cannot obtain a drawing you will only have to go to the nearest goods siding and measure the wagon to produce your own plan.

For one GY truck you will need the following materials:

Tinplate or brass

32 mm. x 19.5 mm., 2 pieces, wagon ends

77 mm. x 17 mm., 2 pieces, wagon sides

77 mm. x 31.5 mm., 1 piece, wagon floor

77 mm. x 5 mm., 2 pieces, solebars

1/32" x 1/32" angle, 6"

1/16" x 1/16" angle, 6"

(Packets of 12 strips obtainable from various model shops)

Other items:

4 axle guards

2 pairs 36" wheels and axles

Various pieces copper wire.

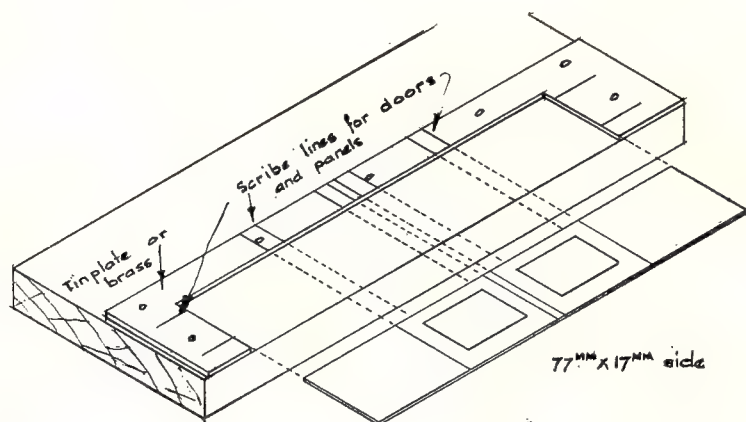


FIG. 1

jig for marking out

When cutting the various pieces of sheetmetal, make sure all edges are square, and parallel. If you are fortunate to have access to a guillotine the cutting will be much simpler and quicker as any number of component parts can be cut with one setting of the machine.

On the 77 mm. x 17 mm. pieces mark out positions of doors and embossed panels. The making of a jig to facilitate marking out, also to speed up production will be an advantage. See Fig. 1.

Having marked out positions of doors, mark on reverse side of material the outline of the embossed panels of the doors (once again the jig will facilitate in this procedure), also mark the diagonals of the panels. Now with a carpenter's wood chisel or similar sharp edged tool, lightly press on each half diagonal applying slightly more pressure at the centre than outside. Repeat for each half diagonal. It would be advisable to have a few practice runs on some scrap pieces of material to get the desired effect. Using a similar tool or chisel go round the edge of the embossing on opposite side of material, i.e., outside of truck

side, to accentuate the panel. Figure 2 will probably explain this better than words. The use of a lino base when embossing the panels will result in sharper outlines.

During embossing the doors, you will find the truck sides have slightly buckled, but don't worry as the sides can be straightened later or left in the buckled state for added realism.

Soldering the pieces together is no problem provided the top edges of the ends and sides are kept in line and the corners square. I have found two pieces of wood fastened together to form a right angle invaluable when assembling the body. The sides of the truck are soldered onto the ends, i.e., the ends cover the thickness of the wagon sides. Solder sides and ends together. The floor fits in between the sides and ends. A rub on the edges with a file may be necessary to fit floor. Solder in position. See Fig. 3.

The rolled top of the sides and ends can be represented by soldering on a strand of copper earth wire along top of wagon. First straighten the wire. Grip one end in the vice and gently pull the other end with a pair of pliers. A long length, two or three ft., is much easier to straighten than a short length. Stand the wagon body upside down on a flat surface and starting at one corner solder wire along one side making sure it is kept in contact with the side, bend at corner and continue around rest of body.

Slightly round off the corners formed by sides and ends, by gently filing and solder on 1/16" x 1/16" angle, keeping angle tight up to wired edge along top.

To simulate the doors, solder the 1/32" x 1/32" angle strip along door edges making sure they are kept square to top and bottom edges. The ends of these wagons are strengthened by pressed metal ribs or angle sections. On the model these can be reproduced by 1/16" x 1/16" angle or a heavier gauge brass strip approximately 1/32" thick filed to shape and soldered into position — two required at each end.

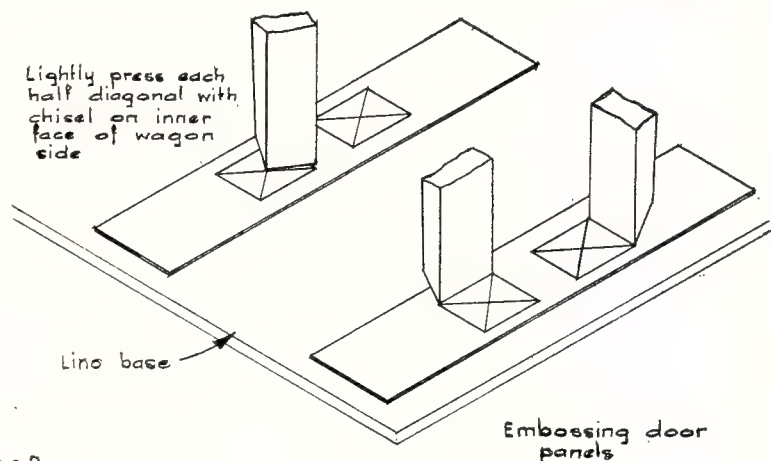


FIG 2

The underframe on prototype is a channel section, but for sake of simplicity an angle section will suffice. On the 77 mm. x 5 mm. strips scribe a line along the strip 1/8" from the edge. Place the strip in the vyce, keeping the scribed line in line with the top edge of the vyce jaws, this will leave approximately 1/16" gripped in the jaws. With the tang of a screw driver, bend over at right angles to form an angle. See Figure 4.

Axle guards of your choice can be fitted, but GY type made by BPR are correct in size and detail for GY and RY vehicles. These can be obtained from Model Dockyard, Melbourne.

On the underside of the floor, mark centreline of wagon, also axle centres. To line up the wheels and to see that axles are parallel, I have adopted the following method: Smear a small amount of "Pliobond" on each axle guard and on floor of truck where axle guards are located. Fix axle guards on one side of vehicle, seeing that they are correctly located. Insert wheels and axles and position axle guards on other side of truck. On top of a "Laminex" table or other suitable flat surface push the truck to see if it runs a straight line, if so, well and good, but if not, adjust the axle guards until straight running is achieved. "Pliobond" being reasonably slow drying, allows time for adjustment of axle guards before final fixing by soldering to floor of wagon. Only a small spot of solder on each corner of each guard is sufficient. The angle strip previously folded to shape can now be fitted and soldered into position.

Shunter's steps are made from strips of tinplate 10.5 mm. x 5 mm. wide.

Scribe a line across the strip 2.5 mm. from one end and place in vyce down to the scribed line, leaving 8 mm. above the jaws. Bend over at right angles and keep 1 mm. in from each side, make two saw cuts. Leaving the whole in the vyce, bend the centre section backwards and forwards until it breaks off. Remove from vyce and you have a step ready to solder in position. See Figure 5.

The hand brake lever can be formed out of 1/32" boiler band as well as the hand brake ratchet.

I will not cover any further detailing, as the amount of detail required is to the choice of the individual modeller. It is surprising how much detail can be left off without being missed by the critical eye.

I have painted my wagons with red primer surfacer as used on motor car bodies by panel beaters and any obliging panel beater will fill a small "vegemite" jar without charge.

Primer surfacer is thick and gooey and can be thinned down with lacquer thinners. Spraying is the best method of application, but I have also seen very good results by applying with a brush, but this takes some practice.

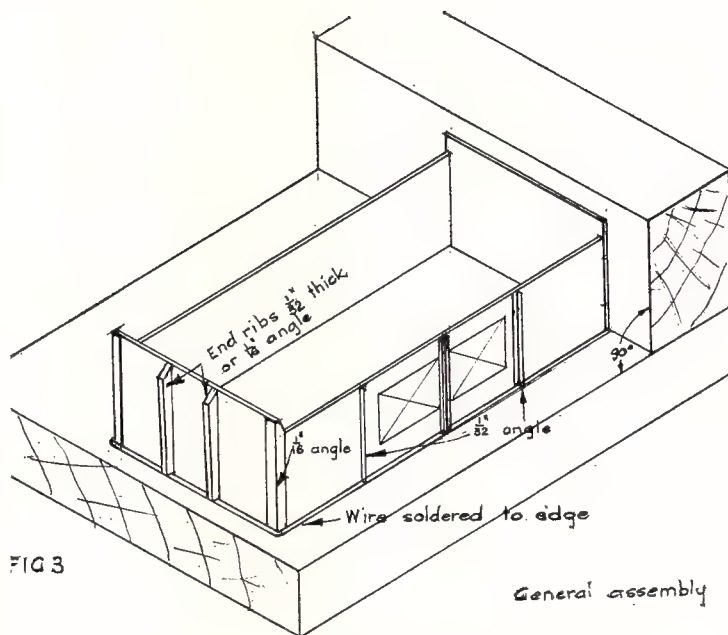


FIG 3

General assembly

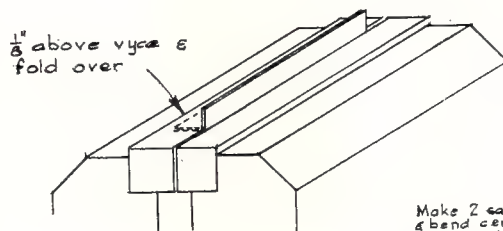
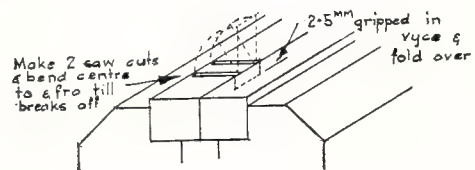


FIG 4 Making channel



Making shunter's steps

FIG 5

HINTS

Realistic water is one of the most difficult things for the modeller to portray when he is constructing his scenery. I have been often asked how I made "water" which lies in the rivulets, ponds and in the creeks under the trestles of my layout. I have never seen this used before and other modelers may care to use this method. Use Selleys P.V.A. Aquadhere woodworking glue. Buy it in the large size as it is much cheaper this way. Pour it over rocks to make waterfalls and in stream beds for the creeks. Wait for it to dry out. Touch it up with oil colours to represent the various colours, shades and shadows of the stream bed. Allow to dry. Apply a second coat of glue. It will have a wonderful "wet" appearance.

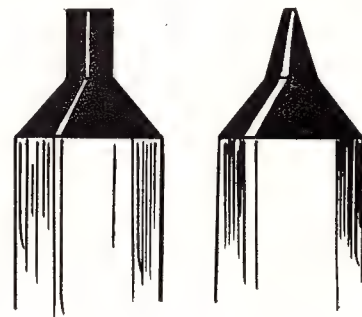
—BRUCE TOMPSON.

File a point on the end of your cement tubes and you can reach and apply cement in much more confined corners than before.

—FRED GILL.

BEFORE

AFTER



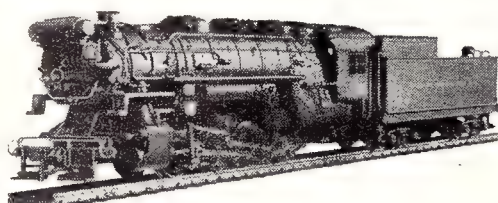
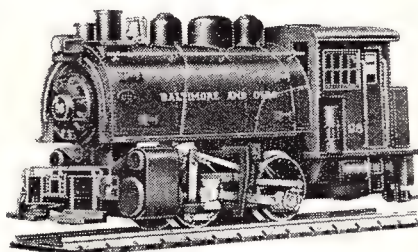
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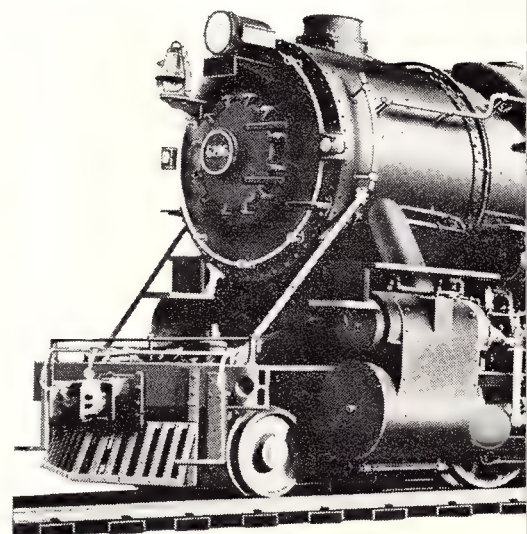
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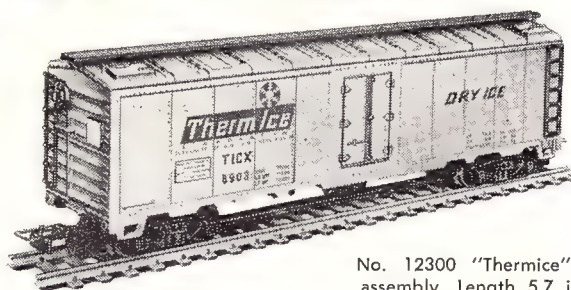
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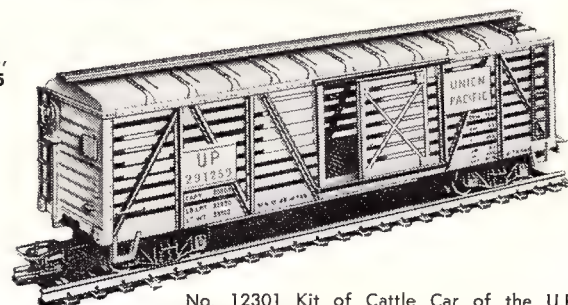
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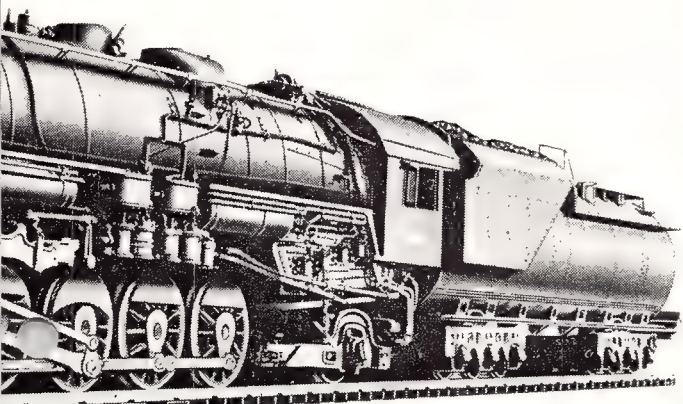
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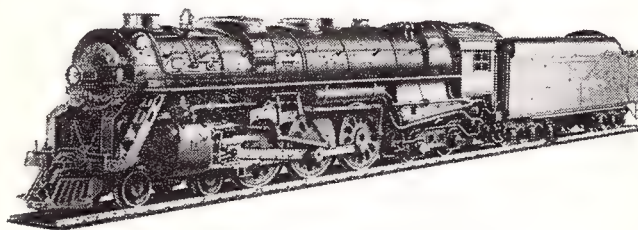
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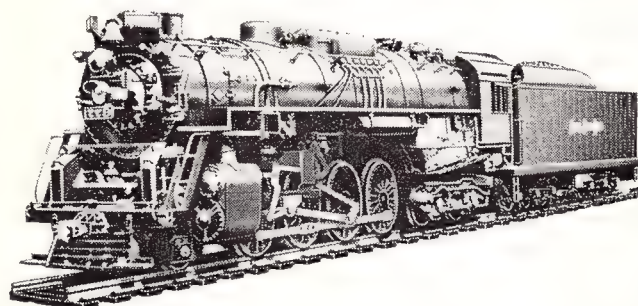
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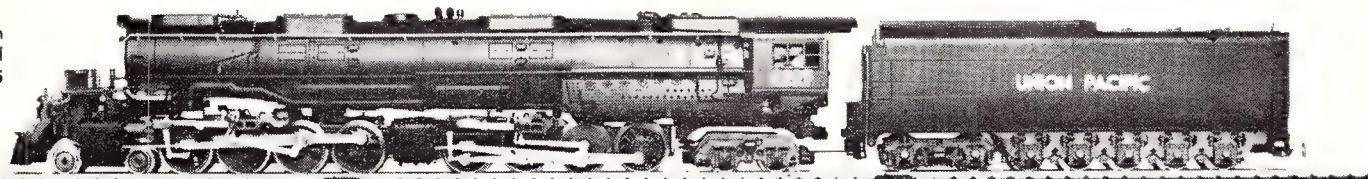
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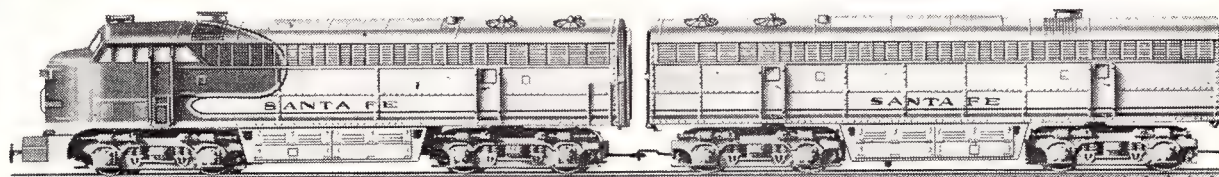


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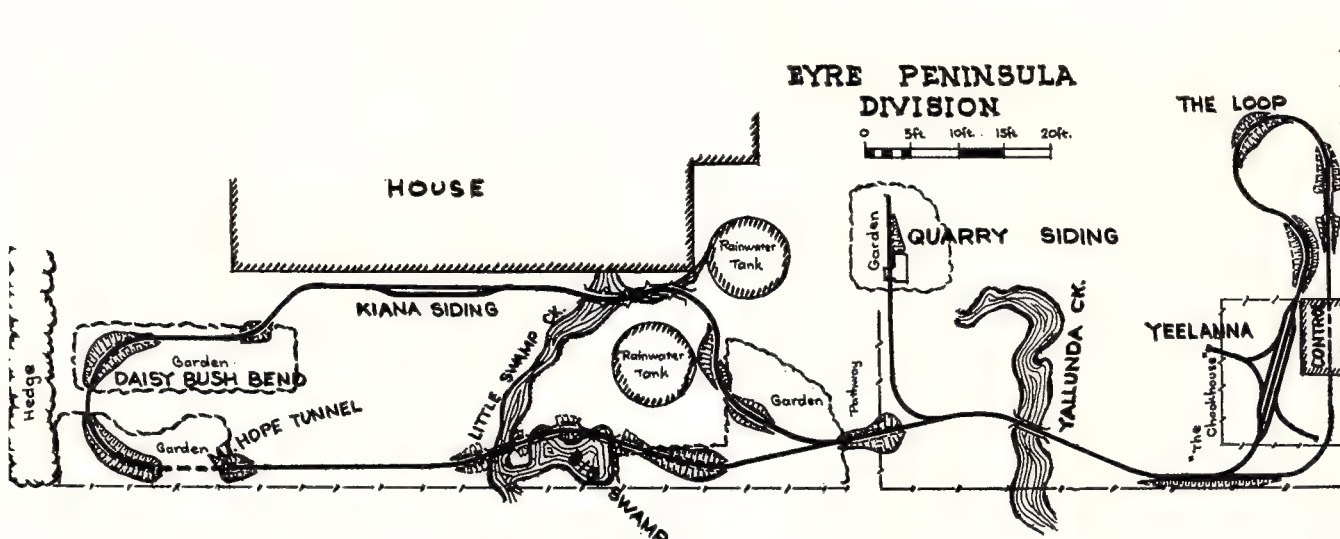
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In 3½

by

RALPH W. HOLDEN

A Garden Layout

The South Australian Railways division on Eyre's Peninsula consists of some 400 miles of 3'6" gauge track for the transport of the rich grain harvest of the area, and is not connected with the other parts of the state system. Probably because of this separation, it has tended to develop a rather distinctive character, and the simplicity, and often crudeness, of its structures and other features, is able to exercise a considerable attraction on the narrow gauge fan.

Although not a model railroader when I first found myself at Cummins — one of the principal junction towns on the system — all sorts of forgotten loves were soon stirred by the frequent sight of the narrow gauge stock rocking along the light track behind an ancient 4-8-0, or newer 870 class diesel. After a while I would find myself doodling away at layout designs or making various scale calculations, only later to put these away as impractical. Being a person whose vocation requires a certain amount of shifting from place to place, the major problem of model railroading is that of being assured of a space for the layout in future homes in whose choice I have very little say. For a while the only practical solution appeared to be a table-top empire in one of the smaller scales. But finally enough courage was found to take a plunge in the

Complete layout plan of the proposed and partially constructed garden layout at the Anglican Rectory, Cummins, South Australia, 1966.

other direction; if there's no room inside, well why not put it outside?

So the decision was made. A garden layout which was to run on 'O' gauge track, but built to a scale of 3/8" to the foot. Thus I could have my narrow gauge (as a 14" track width scales awfully close to 3'6"), I could have it outside, and I could have the pleasure (as it is for me at least) of having to scratch-build the whole thing. And so — according to the standards anyway — we are beginning to get a railroad in 1n3½.

A little more than 16 months have passed since the original conception of the layout was formed, but at least it can now boast of some rolling-stock and some track (even if not finally laid). Unfortunately it was necessary to move from Cummins just as the first of the permanent-way was being laid, and so the fortunes of the system have suffered quite a bit because of this. The original proposal was in the form of a single track with reversing loops at either end. The train would leave Yeelanna — the principal siding — and after travelling along the single track, enter the large Kiana Loop, and pass through Kiana Siding, Mt. Hope Tunnel and across the Big Swamp Trestle, before returning to the single line. It would then pass behind Yeelanna and be returned to this yard by another loop. Because of the completely different kind of area now available, it will be necessary for the new layout to depart from this proposal radically.

To date the only completed stock consists of an FNC class 25 ton flat car, a YF class open wagon, and a brake van. All have been constructed from 22g brass sheet, with only wheel and axle sets purchased. As the scale sometimes requires large diameter wheels, 'O' driver sets have had to be converted for truck use on occasion. Thus rolling-stock is virtually entirely scratch-built, and is detailed with underframes, trusses, and brake gear. Couplings are scaled 'U-frame' as used on the prototype, which means that in operation either a shunting hand will need to be employed, or that the operator himself will have to do a bit of walking. However, this is not too serious a drawback, as obviously a garden layout is not primarily designed for complicated switching programmes. The brake van has its own light source in a battery fitted in one end of the car, which is operated by slightly depressing the stove flue.

An '870' class 70 ton diesel-electric locomotive has been under construction



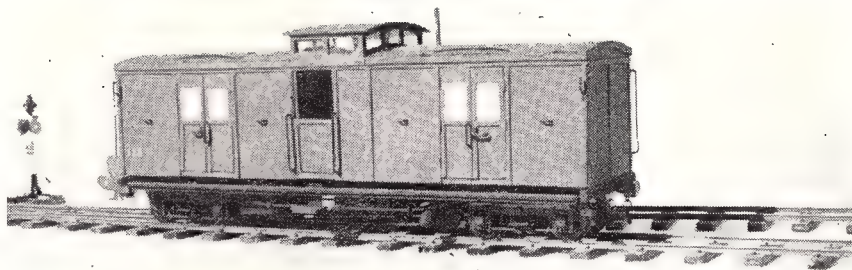
17-ton open wagon.

The author is the Rev'd. Ralph W. Holden, who is at present rector of the Anglican Church in the parish of Minlaton, South Australia. Previous to this he was priest-in-charge at Cummins (Eyre Peninsula, South Australia) from 1963 to 1967, where material from the layout was gathered. Before entering the priesthood he obtained a degree in civil engineering.

since late last year, with the bogies and drive gear now completed, and work progressing on the superstructure. This is to be powered by a Pittman DC105A motor, driving four of the six axles through gears and universal jointed drive shafts. Two rail operation is planned, and the pick-up shoes have been made to bear directly onto the rails to ensure more reliable contact under adverse conditions. The locomotive — as all other stock — has been designed to negotiate 3'6" curves.

The track is constructed from .125" section rail, fixed to stained wooden ties with a black cement of the 'Bostick' type, and later spiked. The gauge actually scales out to 3'4", which is an error of 5% from the prototype. Turnouts, with operating switch stands, are also scratch built.

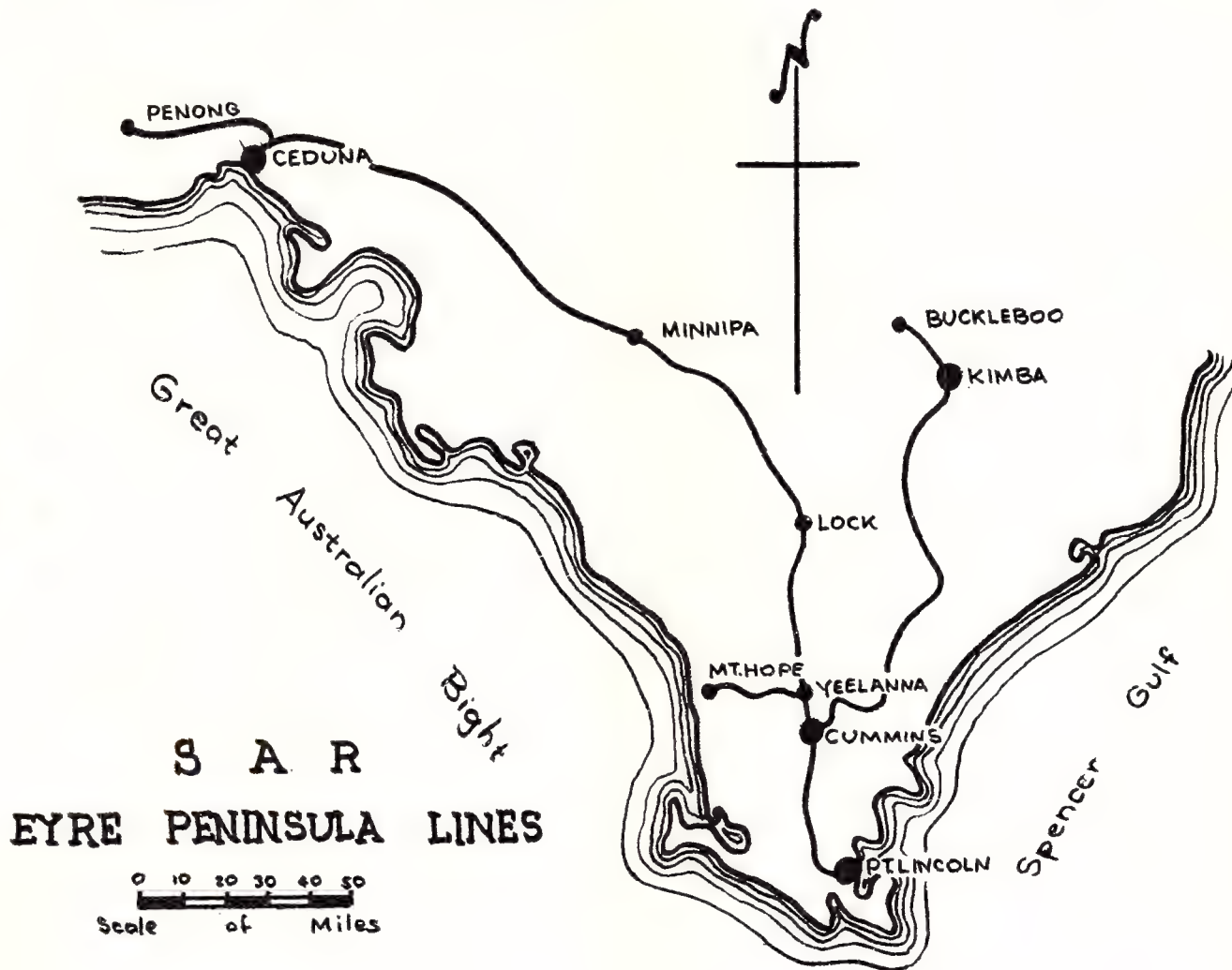
At the present time — as the '870' takes shape at nights — a 44ft. by 23ft. area has been fenced in and provided with a floodlight, and construction is underway on the small control cab for the new layout. As



View of brake van No. 123; typical switch stand also shown.

this area is so different from that previously available at Cummins, a basic loop with a passing track and reversing cut-off is envisaged for the site. If the editor is kind to me, then perhaps when the diesel has been completed and a certain amount of track laid, I may be allowed to write a little more about the Eyre Peninsula Division's little sister.

Map showing the South Australian Railways' Eyre Peninsula Division lines and principal towns.



This is the second article describing prototype station layouts suitable for modelling. The first article appeared in the previous issue of this magazine. It is anticipated that this will be a regular feature.

CARAGABAL

By WARREN WILLIAMS



Caragabal showing station master's office and signal box.

Caragabal is situated on the same line as Pullabooka and is the next station. It is still only single track, but has a larger track layout as can be seen by the plan.

One of its main features is the triangle used for turning loco's. Although used mainly in steam days, it is still used occasionally for turning diesels for preferred cab running, e.g., preference for short hood first on hood type diesels.

At Cootamundra end of yard the Mid-Western Highway crosses the line, via a level crossing. Signalling is provided for by landmarks and home signals.

The platform has two buildings. One contains the Station Master's office and signal box, the other is a goods and parcel storage shed plus ladies' toilet. Men's toilet is at the end of the plat-

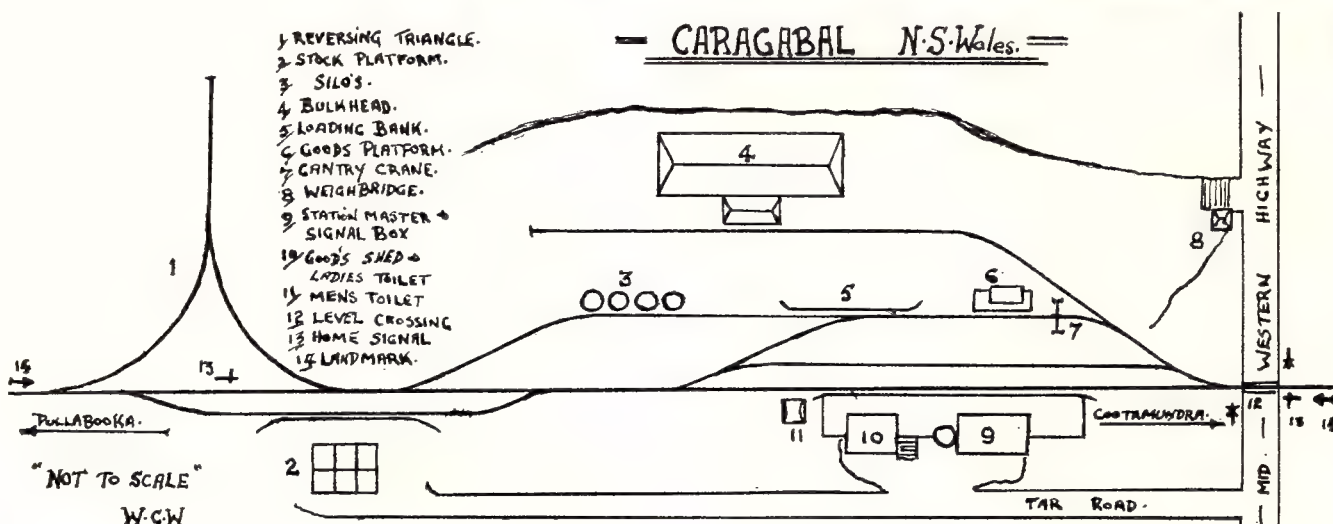
form ramp, and is also of corrugated iron as the one is at Pullabooka.

The yard contains a fixed gantry crane with moving pulley block. On

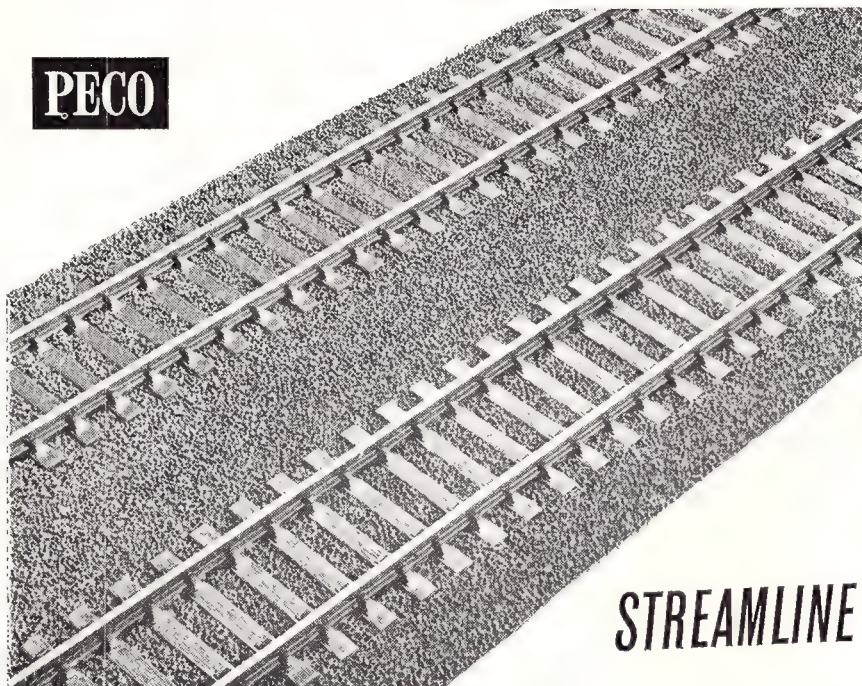
the same track is a goods shed and platform, further along is an earth with sleeper facings loading bank. Also on this track is a four bin silo. The next track is a dead-end and contains a bulkhead for extra wheat storage. The stock platform and siding is on the opposite side of the main and appears to be rarely used now. Traffic is the same as for Pullabooka.

Needless to say these plans are not everyone's cup of tea, but I hope they have helped some of the local scene modellers.

Caragabal, looking towards Parkes.



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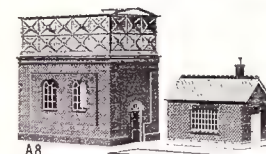
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No. 19 — Early August: A Track Plan for 10x8, illustrated list of Wlad & Peco scenic lines, How to take a Rivarossi motor to pieces without losing the ball bearings.

No. 20 — Late August: Illustrated N Gauge List. Trends in Railway Modelling here; imitating weatherboards; Continuous run track plan.

No. 21 — Early September (coming up at this date): Big Boy in prototype and model illustrated and reviewed; answers to questions; Full Rivarossi Price List; two Australian locos examined.

HOW I BUILT 4417

A BEGINNER'S SCRATCH BUILT LOCO.

by RODNEY TONKIN



In early 1957, NSWGR ordered 10 streamlined 1800HP twin cab diesel electrics. Additional orders in recent years have brought the total to 100 locos delivered, or on order. These locos, designated the 44 class, have become the backbone of the diesel fleet; they haul the "Southern Aurora"; they carry out shunting and any other job in between.

As it is such a versatile piece of motive power, a model of this locomotive will be at home on any model railway, large or small. The basis is a Lima No. 8024 which retails for approximately \$8.50. This provides a reasonable mechanism with 40" wheels. The bogie sideframes and axle spacings are identical to a 44 class. The body of the loco is made of a balsa frame and roof, with bristolboard wrapped round sides. This may not sound very strong but the one I built has stood up to six months of operation on my layout without any sign of structural failure. If treated with respect and given reasonable care it should last indefinitely.

PARTS REQUIRED

- 1 Lima No. 8024 Diesel Locomotive
- 1 pair Couplers — your choice. (I used Kadee MKD 8.)
- 1 sheet 1/8" balsa
- 1 sheet 3/16" balsa
- 1 sheet 1/32" smooth surface cardboard
- 2 feet of 1/32" brass wire
- 1 dozen 3/4" 20 gauge panel pins
- 1 length of brass ladder stock
- 1 dozen 3/4" brass wood screws
- 3 inches of 1/8" diameter dowel
- 1 large Sentinel headlamp jewel
- 2 Sentinel clear marker light jewels

Tools Required

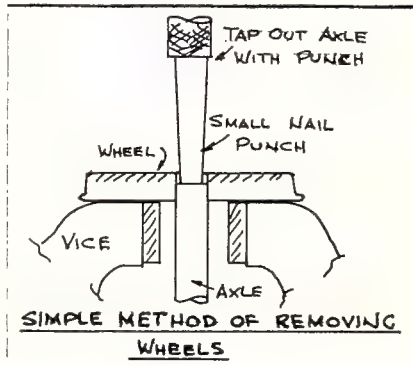
- Stanley or X-acto knife
 3/4" hand or electric drill
 Pin vice
 One 1/32" bit
 One 1/16" bit
 Fine cut file
 Small screwdriver
 Emery paper and wood rasp
 Needle-nose pliers
 Steel straightedge
 HO scale ruler
 Gear puller (optional)
 1 tube balsa cement or white glue
 Small packet Selley's spackling compound
 Small piece of clear acetate sheet

Modifications to the Mechanism

Remove the lead ballast weight by drilling out the holding rivet and set the weight aside. Cut the frame in half at the position of the ballast weight rivet. Cut off the mounting and stiffening lugs at the frame ends and file flush.

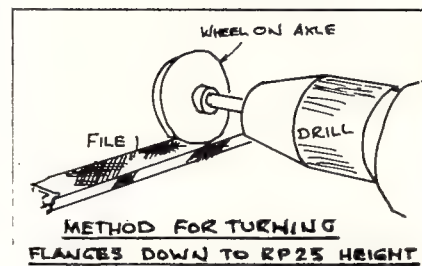
Remove and dismantle the bogies. Remove the power bogie by springing the metal slides and allow it to fall out. Remove the trailer bogie by undoing the motor lead wire and taking off the keeper plate. When removing the wheels and unscrewing the kingpin screw take care not to lose the pickup strip and holding spring. Now file off the end of the bogie frames until they are flush with the outboard brakeshoe hanger.

The wheels are not suitable to run on track or points built to NMRA standards. Two measurements are wrong; the back to back spacing is too small; the flanges are too deep.



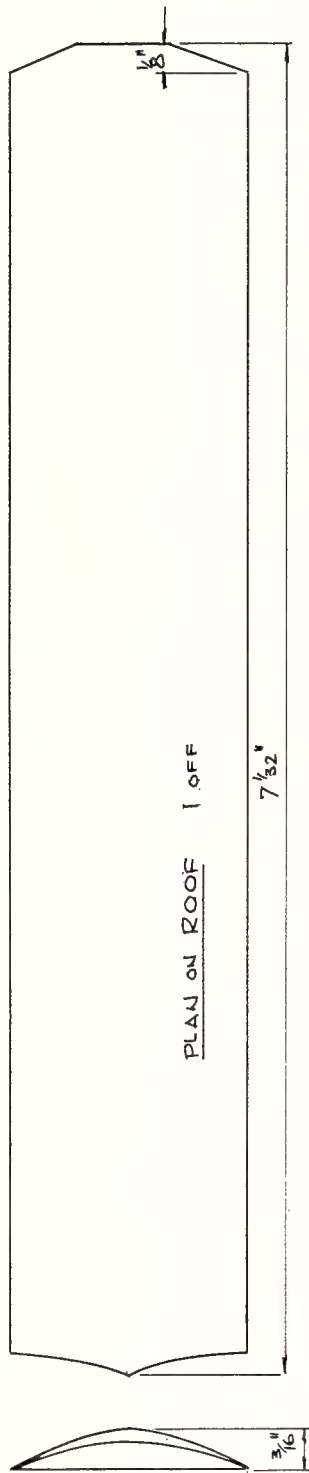
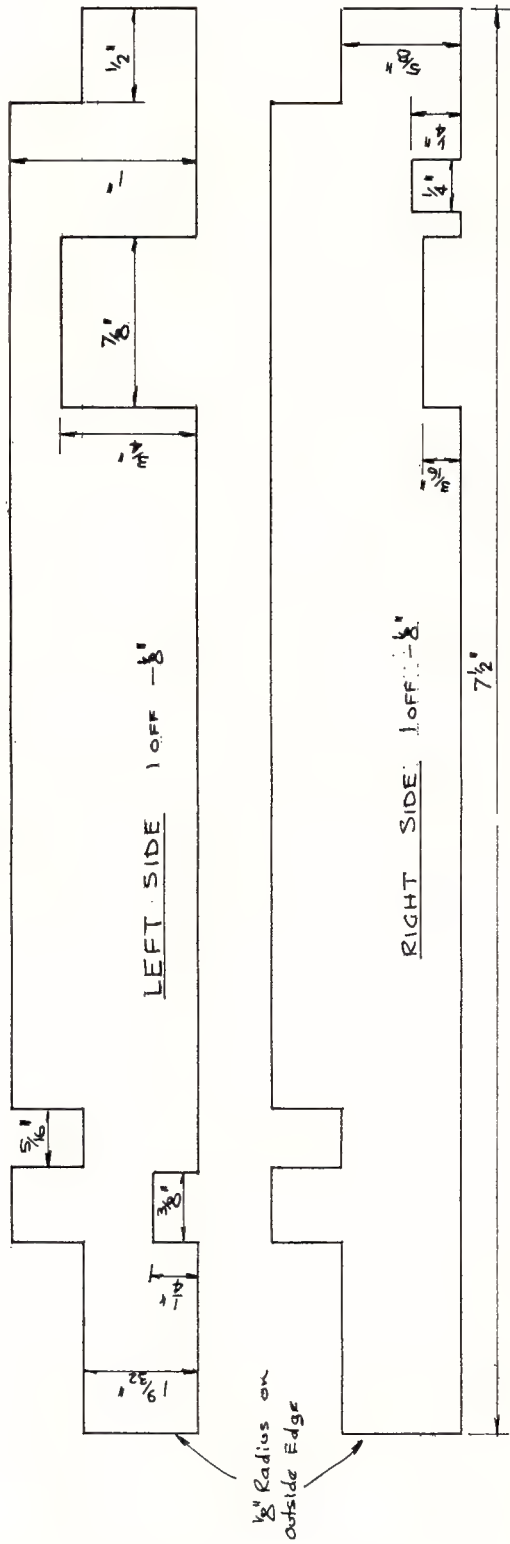
— Official NSWGR Photograph.

The former can be corrected by gently tapping the wheels to the correct gauge. This can be checked by using the NMRA MK II Standards Gauge. If you don't yet belong to NMRA then join now and obtain one free. The second fault may be cured as follows. A wheel is removed from each axle. This may be done as shown in the diagram or, alternatively, one may use a wheel and gear puller which is available at most hobby shop slot car counters. Now take the wheel and axle and put it in the chuck of a hand or electric drill that is securely clamped to a bench. Rotate the chuck and using the finecut file as a tool lightly turn the flange down to RP25, checking it with the Standards Gauge.

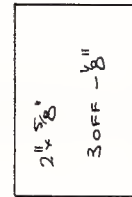
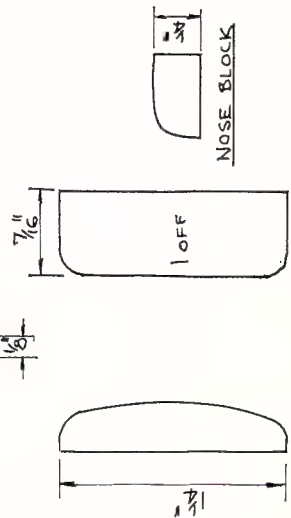


Remove the wheel from the axle and put on the other wheel and turn it down to RP25. Replace the first wheel. Tap the wheels to the correct gauge making sure the wheels are parallel, at right angles to the axle, and there is no wheel wobble. Note that on the drive bogie the axle must be in the bearings before the second wheel is replaced. When the wheels have been reassembled in the bogies, test them by rolling them through some point work typical of your layout. When you are completely satisfied set them aside until later.

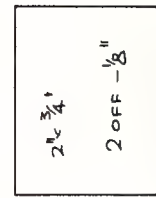
BODY FRAME PARTS



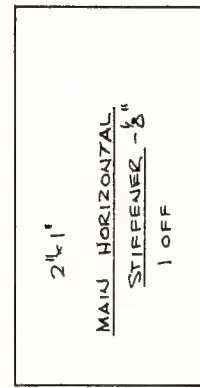
ROOF 3/16" THK



VERTICAL
STIFFENER



HORIZONTAL
STIFFENER



MAIN HORIZONTAL
STIFFENER - 1/8"

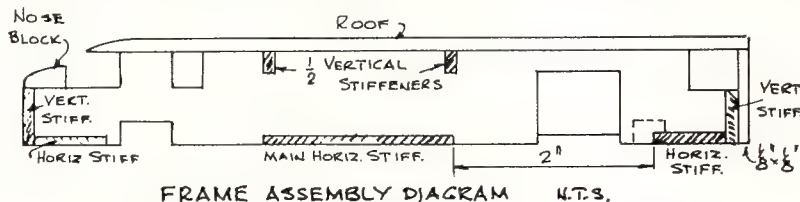
Drawn: Rodney Tonkin.

HOW I BUILT 4417 (Cont.)

RP25 means Recommended Practice 25 which was the result of investigations by a special NMRA committee into the ideal wheel contour. This committee found that it is not necessarily the depth of the flange on wheel which is important, but the profile of the tread and flange together. This is an example of the excellent research work which has been carried out and is still being carried out by various committees of the National Model Railroad Association.

Frame Assembly

Using the diagram labelled "Body Frame Parts" make up the required number of parts to the sizes shown. The nose block can be made up of two thicknesses of $\frac{1}{4}$ " balsa. Both it and the roof are made by cutting cardboard templates of the required shape after tracing them from the plans. Rough shape the nose block with the rasp and finish finally with emery paper. Then fill the grain with Selley's spackling compound and smooth off with emery paper.



FRAME ASSEMBLY DIAGRAM U.T.S.

When all the parts are ready begin assembly of the frame. Take the left side piece and cement to it the three vertical stiffeners, the two horizontal stiffeners and the main horizontal stiffener as shown in the frame assembly diagram. Now cement the right side piece to the stiffeners, making sure that the frame is square in all respects.

When the glue has set firmly the roof and the nose may be glued in position. The corners of the streamlined nose are now rounded to $\frac{1}{4}$ " radius as are the corners of the nose block. The frame is now complete.

Detailing the Body Parts

Cut a piece of $\frac{1}{32}$ " cardboard exactly $1\frac{1}{2}$ " wide and about 17 inches long. This will be the body sheathing. Form this round the frame so that it is level with the bottom of the roof and held against the sides and the nose. Now cut off the excess so that the ends of the body sheathing are level with the ends of the side pieces. Now remove this piece of cardboard and carefully lay it out flat on a clean section of the work

bench. Now measure the distance from the end of the body side to the front of the roof on each side. Mark this distance in from the end of the body sheathing. This is the position of the frame of the quarter window in the streamlined living cab.

Now lay out the side from this mark on the left and right hand sides of the body sheathing, being careful to put the openings in the sides for the staff-exchangers the right way round. If you do it on the wrong side you will have a body of an SAR 930. The latter run right handed and have staff-exchangers on the opposite side to the NSWGR locomotives.

When this is marked out put it on the frame of the locomotive and see how well it lines up with the roof front, staff-exchanger mounting holes and window openings. While it is in place mark the mid-point of the nose and then lay it flat on the work bench again. Mark the position of the headlamp using the centre line just indicated. Take your knife and cut out the headlamp hole, the shape of the nose, the windows, the staff-exchanger holes, steps, and the sand box filling hole. Use the back of the blade or a small screwdriver to scribe the side doors, nose door and the radiator louvres. Lay out the position of the rivet strips with soft pencil lines and put the cardboard somewhere safe until we need it again.

(To be continued)

"S" TRUCKS FROM AIRFIX

By ROBERT BEATH

Past issues of this magazine have described easy methods of constructing models of N.S.W.G.R. prototypes. Plastic Airfix Mineral Wagons can be easily altered to make excellent replicas of the 'S' truck so often seen on the N.S.W. railway scene and only the purist amongst hobbyists would reject them as not being very similar to a scale model. Remember, however, that the Airfix product is to 4mm. scale.

Take each of the body sides and carefully cut off a section from the bottom until the side is 12 mm. high. Put aside. Take the end with the

vertical struts and treat similarly. The other end has incorrect diagonal struts and the modeller must carefully remove these by filing. Again make the side 12 mm. high. Now from the waste cut from the sides, cut vertical struts to match those on the other end and carefully glue in place.

Now the sides and ends may be glued together and onto the floor. Make up the rest of the underframe as shown in the Airfix instruction leaflet.

Before fitting the axle boxes, drill them out with a No. 40 drill and press fit a Peco brass wheel bearing in the hole.

Purchase and fit 12mm. diameter Jackson (Nucro) wheels which are very accurate and trouble-free. They are

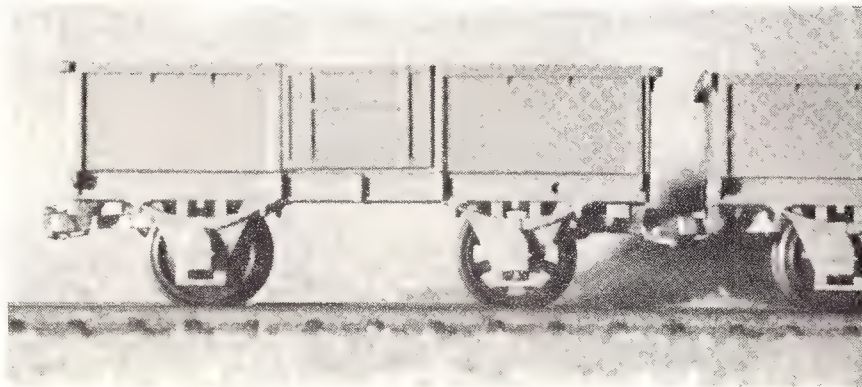
made in three types — spoked, disc or holed discs. Mix them up on your wagons as the prototype wagons often have dissimilar pairs on the same vehicle. Discard the plastic wheels.

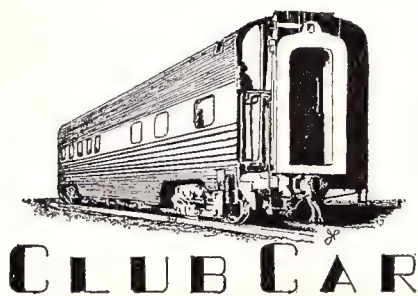
Now you have a basic 'S' truck and refinements may now be added. Add the buffers if you wish or be more modern without. Use staples to make the steps. Put some plastic sprues in an electric drill chuck and turn up your own brake cylinders and glue in place.

The final part of construction of the wagon is to fit couplers of your choice. Plain knuckle type may be used with success as they will mate up with Kadees quite successfully or put knuckle types on all wagons except each end of a train of wagons and always run them in sets. Put your couplers of choice on each end of the train. Fill the spaces below the buffer beams with epoxy resin and file to the same shape as the prototype.

Give your wagon a coat of matt black paint and letter with white. Now take a little of the black and dilute with white and thinner until it is a very watery wash and dirty up your masterpiece. Now you have an 'S' truck that you will be proud of.

This idea to build this commonly seen piece of N.S.W.G.R. rollingstock was originally the idea of Tom Holmes who, as many local readers will know, has built some extremely fine models of N.S.W. prototype rollingstock.





To Club Officers: These pages are available for the dissemination of news about your societies. Brief news about activities will be welcome for these pages. Closing date is fifteenth of month prior to month of issue

The Yagoona Model Railway Club will soon be holding its second exhibition on Friday, 6th October, from 7-9 p.m. and Saturday, 7th October, 9 a.m. to 5 p.m., at the Presbyterian Church Hall, Church Street, Yagoona.

The club's layout is 36 feet long in HO-OO scale and is made up of four sections, each of which is part of our member's own layout. When joined together, these sections merge into one continuous unit, showing how proprietary model trains of almost all types may be used together to run smoothly.

A small country town is connected to a harbour with associated installations by a main station with yards and terminal buildings. All trackwork and points are Peco Streamline and Thyristor controllers are used for all slow speed working.

Adding interest to the exhibition, Jack Shambler (N gauge), Frank Meehan, John Coombes and Bruce Toomey have contributed smaller layouts to give a comprehensive picture of ideas for all model railway enthusiasts.

BERT TOOMEY,
Hon. Secretary.

9 Brodie Street
Yagoona, N.S.W. 2199.

CANBERRA MODEL RAILWAY CLUB. Secretary: F. Holloway, 58 Janz Crescent, Griffith, A.C.T. 2603.

The Annual General Meeting was held on 5th July, 1967, at the home of the President, Mr. C. W. Bennett. In presenting the annual report the President commented on the successful year enjoyed by the Club. Membership has increased and the balance owing on the clubhouse has been paid.

"The object of this club," said the president, "is to engender companionship amongst people interested in an extremely fascinating hobby with all its varied facets and with virtually no limitation."

Bruce Blok moved a vote of thanks to the retiring officers who then stepped down in accordance with the rules.

Officers elected for the coming year:
President: CHARLES BENNETT
Vice-President: NORM BOWKETT
Secretary: FRED HOLLOWAY
Treasurer: JACK RICHARDSON
Publicity Officer: TED O'HALLORAN

At the conclusion of the Annual General Meeting, the July meeting was held. It was decided that each member in turn give a talk at meetings on the aspect of railway modelling in which he is most proficient.

The August meeting was held at the home of Norm Bowkett. As the first in the series of talks arranged in accordance with the decision at the July meeting, Norm gave us a talk on Transistorised control and demonstrated its use on his layout. The results were most impressive.

Our next meeting is scheduled for 6th September. If you will be in Canberra at that time you will be welcome to come along. Just ring Fred Holloway (home: 91807; work: 40411, ext. 393), or Ted O'Halloran (home: 811774; work: 3659) and we will arrange things for you. If you are visiting us here in the National Capital at any time, a telephone call to either of these two people will usually get you into the swing of things from the model railway point of view.

FLINDERS MODEL RAILWAY SOCIETY. Hon. Sec.: Lauri Jackson, 74 Cuthbert Street, Broadmeadows, Vic. 3047.

The July meeting was held at Jim Blaney's home in Mount Waverley. Several members brought along new rolling-stock, which had been scratch built, evidence of an increasing interest in this most absorbing facet of our hobby.

Jim Blaney and Russ Siddall produced the bodies for the T Class Diesel Series, one in HO and one in TT, both made from tinsplate from empty Ovaltine or similar containers. Members building the T Class received instructions on the body building which constitutes the current month's activity.

This was followed by a film show given by Peter Duckett of the Model Dockyard. He showed films taken in Japan whilst on a business trip. Peter is a well known traction addict and his filming of the tramways over there very nearly converted a few diehard steam men.

The highlight of the show was a section filmed from the motorman's cab on the new high speed track near Tokyo; you could almost feel yourself moving at 200 km.p.h. Many thanks to Peter for a wonderful evening, and to Mrs. Blaney for her hospitality.

At the monthly meeting held on 12th August at the home of Keith Nelson, Jim Blaney and Russ Siddall continued their instructions in the 'easy' way to build a 'T' class diesel. We have reached the stage where detail is appearing and the mess of wire and tinsplate looks something like a diesel. We had the judging of the competition for the building of a V.R. 'J' class hopper wagon, entries in both beginners and advanced sections were of a high quality. The judges took a long time before awarding the beginner's prize to Ian Weickhardt for his 4" scale model and the advanced prize to Peter Davies for his 'HO' model.

The upsurge of interest in scratch-building has led to the introduction of a series of classes in the subject. The first

was held on August 18, when a start was made on the V.R. 'Z' van, surely the most luxurious brakevan on wheels today!

Keith Nelson is building an HO layout in a basement. At present most work is being done on the baseboard of what promises to be a most interesting layout.

Meetings for the next two months are as follows:

Saturday, October 14 — Jack McLean, 60 Kenmore Street, Box Hill.

Saturday, November 11 — Stuart Barker, 17 Cromwell Street, Glen Iris.

The 'open' building competition will be judged on November 11. Arrangements for a dinner in late November are well in hand. It is proposed to make it a social affair, wives (NMRA widows) are cordially invited.

CENTRAL COAST MODEL RAILWAY CLUB.

Hon. Sec.: Bill Cleary, 49 Holden Street, Gosford, N.S.W. 2250.

The Club has made steady progress during the past 12 months, and has now embarked on the ambitious project of building its Hawkesbury River Scheme.

These facts were revealed by the club secretary in his report to the club's fifth annual meeting held at the Gosford Boys' and Girls' Club recently.

It was revealed that when the layout of the Hawkesbury River project is completed, various district organisations will be welcome to seek the club's aid in their various functions, such as school fetes and displays of handicrafts.

Newly elected club officials for the ensuing year are:

President, Lionel Wallace; secretary, Bill Cleary; treasurer, Graham Williams; publicity officer, Len Dodds and librarian, Ron Dawes.

The patron's perpetual trophy donated by Dr. Michael Dwyer was won this year by a model of a N.S.W. suburban platform ended car, exhibited by Graham Williams.

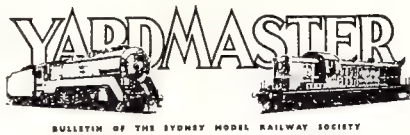
Second position went to Kevin Ryan and third, Geoff Wallace.

Junior members were reminded to bring along their models each Thursday night and an invitation was extended to visitors to attend any of the meetings held every Thursday night.

An interesting visit was made by some members of the club recently when they were guests of the Eastern Division Southern Cross Model Railway Association at the home of Kevin Ryan. This was an excellent opportunity for the boys from the Central Coast area to get acquainted with the Sydney fraternity and learn a few pointers.

If you like a trip by train and you think you've seen some places, well, club member Kevin Ryan has just returned from riding the high iron. From Melbourne to Cairns, practically the full length of Eastern Australia. Kevin's camera was busy too, capturing the highlights of his trip. Some of these moments and places will no doubt be enjoyed by many of his fellow enthusiasts from time to time as he recalls his trip.

About the time of the next issue of this magazine, many of the Central Coast Model Railway Club members hope to renew friendships and make new friends when they mingle with all the team that go to make the annual Town Hall show the biggest and best in the Southern Hemisphere.



NOTES OF THE SYDNEY MODEL RAILWAY SOCIETY General News

The 31st Annual General Meeting was held in the clubroom on Monday, 24th July. Before calling the meeting to order, Secretary John Brown said that he was sorry he had not given written notice to members as his parents were ill and he had not attended meetings.

The President, Paul Simpson, presented his report and said that there had been a greater increase in membership. There were now 41 metropolitan and eight country members. He extended a warm welcome to the following who had joined during the last 12 months. O gauge members were: R. Rowlands, J. Davies, I. Bunker, C. Applebee, T. Wyeth; new HO gauge members were: J. Wheeler, J. Huxtable and M. Rowe.

The President said that he regretted to have had to inform all members present at the 13th March meeting of the death of O gauge, Bob Stone. As a mark of respect the members had stood for one minute of silence. Several members attended the funeral service.

He announced that Bob's widow had left his O gauge rollingstock for retention and maintenance by the society in remembrance of Bob.

The extensions to the HO layout had been completed, Paul informed the meeting. He said the layout was again operating with timetable, speeded-up clock and new control board. He hoped there would now be a greater increase in members in both scale and thus increase the number of operators and also the supply of locomotives as on some nights lack of locomotives had caused loss of train hauling time.

On 17th July, it was appreciated when the manager of Hobbyco brought along a 3.5mm. Japanese model of a Victorian R class. This manner of displaying by hobby shops of latest models in action enabled members to inspect products at leisure and see them perform.

The O gauge timetable had been altered, said the president, so that when operations were completed for the night, the timetable was left at the last position and running resumed on the next night from that point. This meant that members now complete the whole of the timetable, which added greater interest to the running.

Twenty-eight new name badges had been placed into use, Paul Simpson said, and when a sufficient number of newer members warrant more name badges they would be obtained.

Paul said Christmas night saw a large attendance with members bringing their wives, children and friends. Some of the film had to be substituted but one was on the Japanese 150-mile per hour Tokaido Line. Supper was held during the film interval and a good night was had by all.

The president thanked Secretary John Bowen for the work he had done in the past year, which had been particularly difficult, as he had had to fit in his work at home, as his parents had been very

sick with only John to care for them. It was hoped that they recover soon.

The Treasurer, Ken Smith, had been very busy this year with new members and subscription renewals and the president said he would like to thank Ken for carrying out his duties so ably and asked all members to assist him by paying subscriptions promptly.

Thanks to Lionel and Don and both Train Running Committees excellent work in arranging club rosters, etc., said Paul.

The president finally thanked all members who had attended on Monday night without them the clubs could not function and he asked that all members continue to assist and help each other in our hobby of model railways.

The secretary and treasurer presented their reports. The treasurer's report may be seen by members if they contact the secretary.

Two new members were accepted at this meeting and were David Platt, HO and O gauge, of South Tamworth, and Harry Edwards, HO, of Picnic Point. They were welcomed to the club.

The following were elected unopposed to the committee: President, Paul Simpson; Vice-Presidents, Norman Read and Lionel Glendenning; Secretary, John Bowen; Treasurer, Ken Smith; Auditor, Arthur Wheatley; Librarians, Don Stone and Max Bourke; Running Committee, O gauge, Don Stone, and HO, Lionel Glendenning; Reporters, HO, Lionel Glendenning, O gauge, John Bowen.

'O' GAUGE NEWS

Very little to report as your reporter has been away. Max Mitchell, a recent new member who has come up with WAGR and freelance rollingstock, has now come up with the old Slate Car "AC", and as far as your reporter knows this is the first time such a car has been modelled, and the model is very fine indeed.

Barry Millner, who works on both layouts has been transferred to Melbourne for a year, but though we won't be seeing much of him, we will still think of him. John Alexander has been busy on the Junction diagram and by the time this is in print it should be working. This is the first of such boxes to come.

—JOHN BOWEN.

"HO" ACTIVITIES

July saw the completion of the new alternative track from Central to Glenvale, including the scenery and structures, which were provided mostly through the efforts of Arthur Wheatley and Max Burke with the wiring being installed by Dennis Sherring. Opportunity was taken to institute a completely new timetable prepared by John Carter and on the first night the problems of keeping to time outpaced the scaled down clock which had to be stopped frequently to permit perspiring station masters and shunters to handle their duties according to the book. The weekly change-around of operators to the Club's 10 boards didn't help to familiarise each with the variations of the timetable and consequently the newcomers fell into the same errors in the new positions as did the forerunners.

A highlight of the July meetings was the arrival of Arthur Wheatley on one evening with no less than 36 NSWGR BCW wagons beautifully made and accurately finished in the drab grey-black of the real thing. All eyes watched him

produce and place on the track the full complement of cars made from plastic per rubber moulds. Few had ever seen so many models of one vehicle apart from commercially-made equipment. The next thing everyone wanted was to see a loco on front and Barry Millner obliged with his SD9 diesel, which backed onto 27 BCW's on test. It drew out of Central and away down the Main through Junction onto the Plateau branch and later routed on the new line mentioned above for Glenvale. This provided a terrific sight as the lengthy 'cattle special' ran down the grade on the outside of the layout and over the bridge spanning Glenvale below and into the tunnel for the long reverse curve bringing it to Glenvale level, then on to the continuous return track. This skirts Glenvale and connects at Wits End Junction and shares the up road back to Central from that point through Junction.

This display whetted the enthusiasm of the admiring onlookers who called for a full show. Barry's SD9 was uncoupled and a heavily-weighted F7 belonging to Ken Smith was backed onto the long line of BCW's. The consist was then eased down the Branch to Wits End, where Arthur Wheatley took over the throttle and speeded his 27 cars of prime beef, plus van around the continuous loop at Wits End with nary a derailment, a fact which drew forth loud congratulations from all the HO and O gaugers assembled. Then came the suggestions, of course, to bring down the remaining nine cars from Central and add them to the original train. A GP 20 was hustled up by the loco chameleon at Central and coupled on to the nine BCW's plus a guards van and, with Barry Millner at the controls, was passed through Junction and eventually to Wits End. Here a neat piece of shunting was performed by Arthur in dropping off the van and marshalling up the mammoth 36-car stock de-luxe.

Then with two diesels out front, the longest train of one type of stock gathered pace as it drew out of Wits End to make several circuits of the test loop without a single derail, a fact which evoked more applause for the workmanship of the models and their superlative running qualities.

Another offering, which was greatly admired was John Huxtable's TT model of a NSWGR TAM sleeping car which, for fine detail and beautiful workmanship is one of the finest efforts ever seen of rollingstock built by a member. He is building four cars and there are threats that some of the HO's are thinking seriously of going over to John's gauge.

June 27: Arrive to find Dennis Sherring busy with the installing of more keys on Junction Control Board to make it more effective to operate. These will be operated to control trains arriving from Central on down main. The gap in down main track in front of signal controlling movement ahead of crossover and branches to Wits End and Plateau was moved back a foot by Barry Millner to stop Central driver from driving past signal and fouling crossover.

July 3: Barry Millner and myself were very busy adjusting points that were giving trouble on last operating night. One was very hard to adjust so when Arthur Wheatley came in he took over and soon had it working like a charm. John Wheeler soon had members interested when he opened a parcel containing a few moulds from which rock plaster can be cast. He told members how it was done by putting latex rubber on rock from which you wish

to make a mould. The pieces that John had were quite good samples. See John for further information. Noticed Ken Smith and a few members discussing his efforts at making a pattern for making a NSW. MHG guards van from the rubber mould method. I had a look over their shoulders and it looked OK to me without putting on the scale ruler.

July 10: I was busy putting the boxes which contain the timetable sheets in at Plateau and Central Goods Yard, while Dennis Sherring was at the back of junction board this time wiring up the Down Main signal, which protects crossover from down to up roads. This will read as two greens, clear road; two yellows, for turn outs, green over red next signal at danger. A good night was had by all present, plus a few visitors who were watching as members operated the layout to timetable. Barry Millner was Station Master, Signaller, and Driver at Glenvale. He marshalled up No. 1 and shunted into Platform No. 1, set road to Wits End and offered train. In the meantime, he built up a good head of steam for a quick run up grade to Wits End, this being a long hard climb around back of layout. On receiving a green accept light, he opened the throttle and took off like an electric, straight into the turntable road, across turntable and into side of cliff.

When the loco hit the cliff you could hear the crash all over the layout, bringing everyone running to see the pile up. Oh, boy! was Barry's face red and with all the ribbing he received. Anyway, all is forgiven, as no damage was done, except for a mark on cliff face.

July 17: Dennis Sherring was busy as usual. Had Junction Down signal blinking from RED to GREEN. We put a new gap in Down Main to give us a section of dead track in front of signal, which will be powered through relay when signal goes to Green. Had a couple of visitors in to see how layout had progressed and were interested to see how their new locos would run on our layout. One was a "R" class 4-6-4 Victorian Railway's steam prototype, and what a good looking engine it was, being pleasingly different in appearance and design. It ran very sweetly and was a good performer. The next was a Rivarossi French Railway's prototype Pacific steam engine with a lot of detail and a smooth performer also.

The last one was the biggest loco of the Rivarossi range, a Union Pacific 4-8-8-4 Big Boy with centipede tender. It looked terrifically powerful as it moved down the carriage yard onto the shunting neck, where it was stopped to throw the points out of shunting neck across to Down Main, then via scissors cross-over into No. 1 Platform at Central. As the throttle was gradually opened you could imagine the steam rushing into the cylinders and pushing the conrods back, as she moved gradually backwards and everyone was wondering if the flanges would be too coarse or it was too big and long to cross over two cross-overs in succession, as it is a test for any loco or rollingstock. As it inched over the cross-overs, everyone could see that it would make it. After this test the Big Boy was coupled up to three coaches and the throttle was opened and it ran over the layout tracks with superb running qualities.

July 24: General meeting last night — so we had no running except our newest member, Michael Rowe, placed on the track at Plateau, a Chicago & Northern Atlantic 4-4-2.

Prototype modelled by Tenshodo. This engine and tender were painted green with a black smoke box and stack to go with this handsome engine where three open-ended clerestory roofed passenger cars with a baggage mail van open-ender all modelled by Tenshodo—these were painted green and made up an impressive looking train, which will be a great help in the rollingstock and loco roster Monday evenings. When Mick had put on an imaginary few shovel fulls of coal and had steam up, he opened the throttle of his Atlantic and she whistled out of Plateau, climbing up over the hills and was a great sight as Michael Rowe's train came out of the tunnel onto the great trestle bridge, which was designed and built by Arthur Wheatley. After passing over the bridge the train came down the mountain side into the Valley, through the deep cutting in the low hills dividing the Valley from Wits End.

Then at express speed it passed through No. 2 platform at Wits End, as the driver had greens on the up main signals through to Central. Congratulations to Mick on a nice run. Great to see Bob Brewer, a good member of long standing, and to hear how he was progressing with his home layout.

July 31: One of those bitterly cold nights which gave us a poor roll up. It never affected Bob Moffat, who of course lives on the Blue Mountains and now is acclimatized. Anyway, it was nice to see Bob's cheery smile and to see his Budd car being used in the rollingstock roster. Two things which made the evening interesting were firstly, a nice four-car set of N.S.W. suburban electrics commonly called Spudniks, which were made by Tri-ang in Australia. You wouldn't recognize them after Arthur Wheatley had given them the treatment, such as painting the insides of the bodies black and the outsides tuscan red. After which he lined the frames of doors, window and louvre vents with a mapping pen dipped in black Indian ink which lifted the detail beautifully.

This was much admired by the members. The bogies had Peco nylon wheels and brass bearings and the motor bogie wheels were ground down on a grinding wheel with much flying of sparks (said Arthur). The pantograph had been modified to the latest N.S.W. type. The next thing to happen was a beaut smash right in front of my eyes. I was operating at Wits End (well named), and Arthur was at Junction. I offered a goods train on the up branch and looked over my shoulder to see if everything was clear. Seeing that it was, and not waiting for the green accept, I opened the throttle and drove goods onto the single line bridge across Wits End tracks and left it there for Arthur to take over when he was ready. The next thing I knew was seeing Arthur's four-car electric set coming around the curve on to the bridge. It was too late. The four-car set ploughed into the goods. The front power car leapt up off the track on to its side, the next two cars crashed into the side of the bridge and it and the cars plunged down on to tracks below. The last car stayed upright, but off the rails.

All I could do was turn around to Arthur and say "sorry"! After picking up the cars and seeing no damage had been done and the bridge placed into position, we all went back to our operating positions and waited for green accept lights before opening the throttles.

—FRANK SHENNEN.

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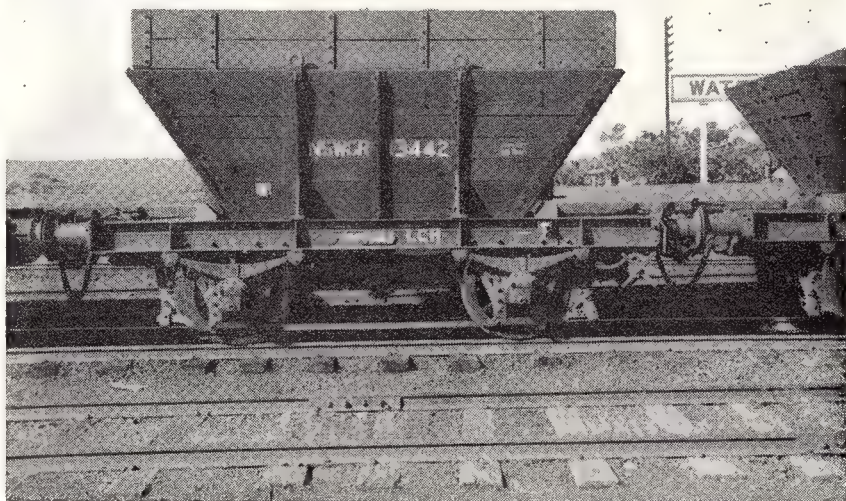
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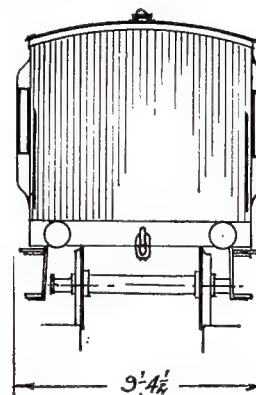
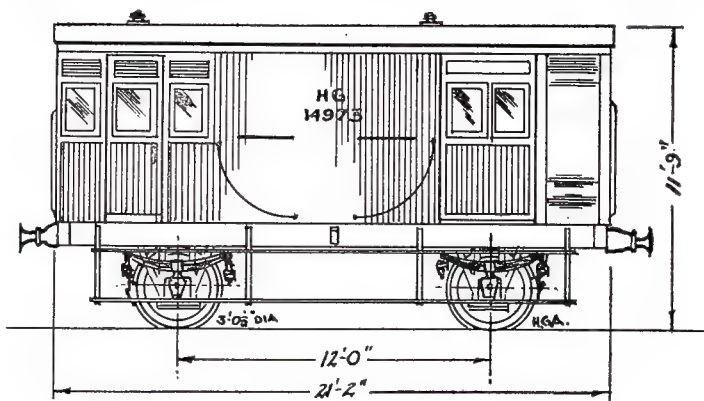
MODEL Railroader March 1960, November 1960; Railroad Model Craftsman November 1956, Tim Moss, 189 Homer St., Earlwood. 2206. Phone 55-1665.

OUR PLAN

Readers can consider themselves lucky this time. Howard Armstrong has drawn details of two NSWGR 4-wheel wagons. The plans appear opposite. In the photograph, the HG brakevan marked "Yass Town Only", was used on the Yass Junction-Yass Town branch until January, 1967, when it was replaced with an OHG brakevan. It is believed that it was the last HG in revenue service. It has had the passenger compartment removed and bracing added to the outside. The other photograph depicts the CCH hopper wagon so commonly used on the Illawarra line in N.S.W. for coal or metal carriage.

Photographs by Howard Armstrong.





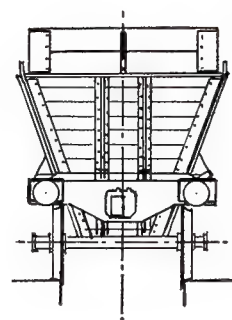
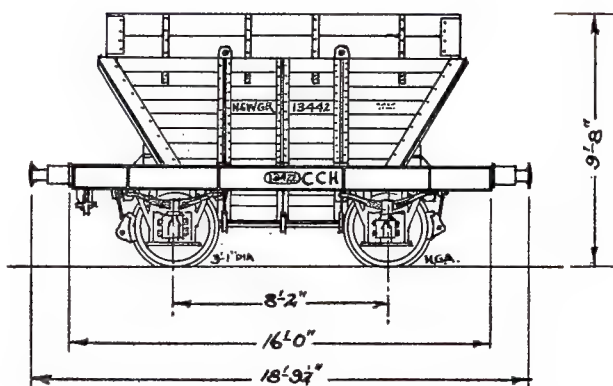
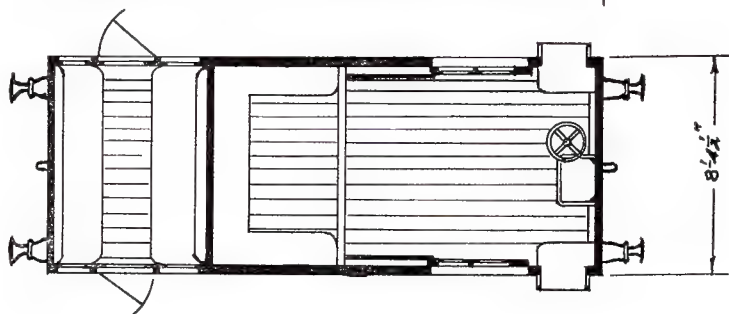
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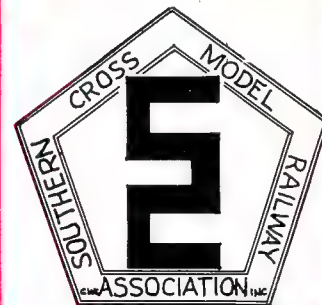
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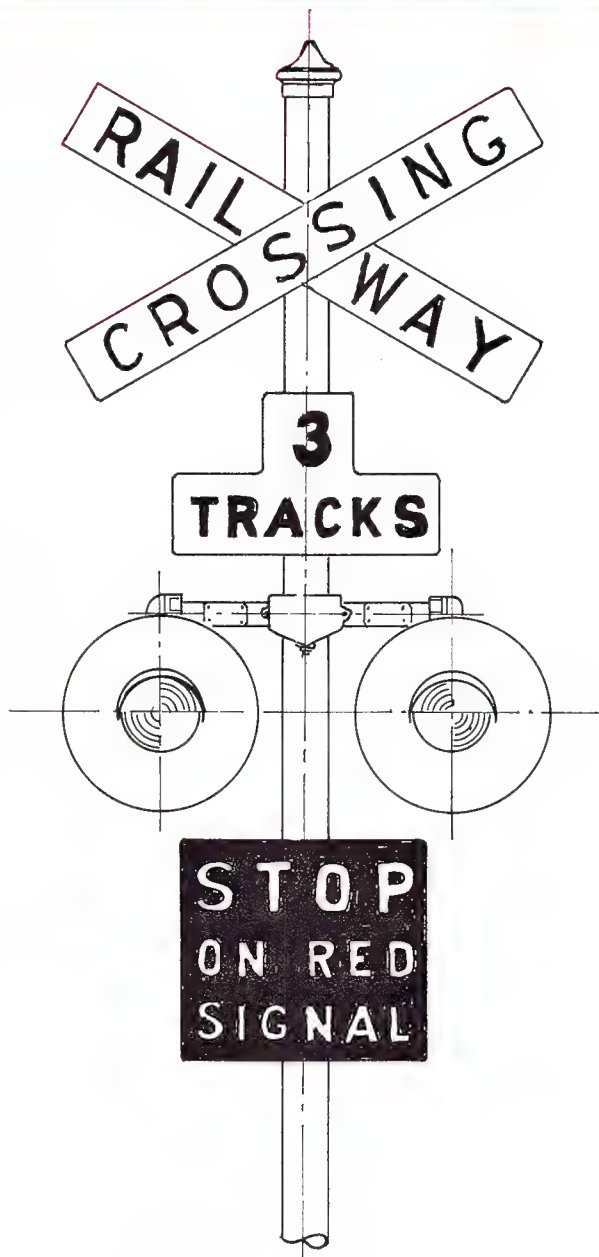
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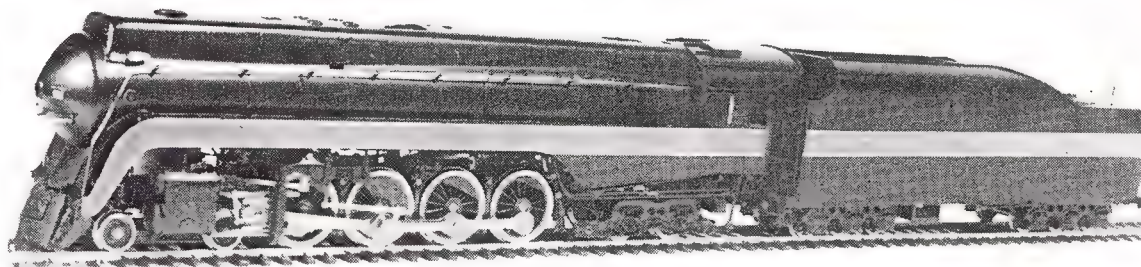
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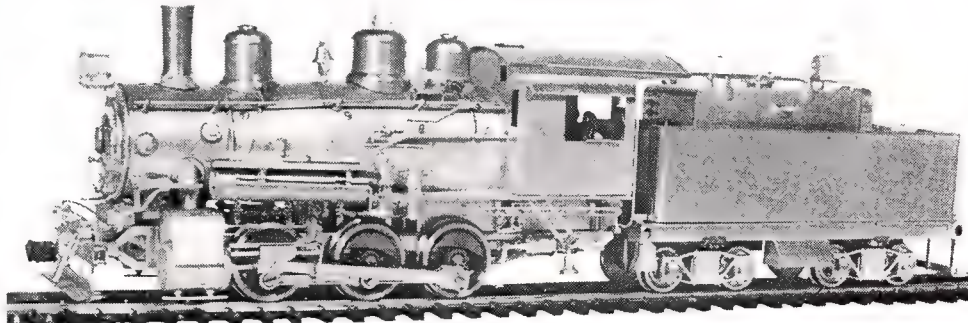
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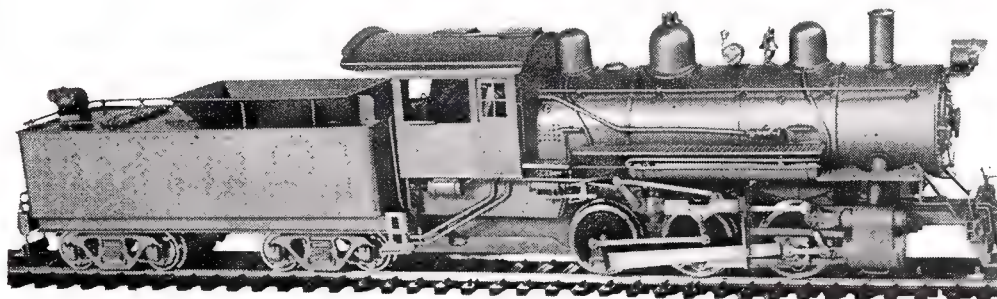
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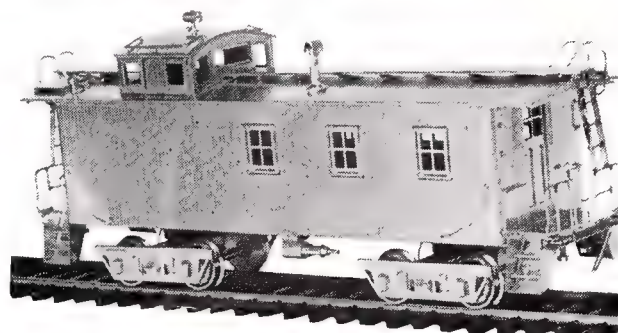
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Manufactured by Kumata to the order of Trains, Inc., this Switcher comes with 'clear vision' tender, sprung frames and honed, satin finish. Given an excellent review in July, 1967, "Model Railroader" and declared a "...well detailed, free running model...capable of handling 21 to 23 cars..." Overall length, 9 $\frac{1}{2}$ ". Weight, 1 lb. Price: \$48.00.

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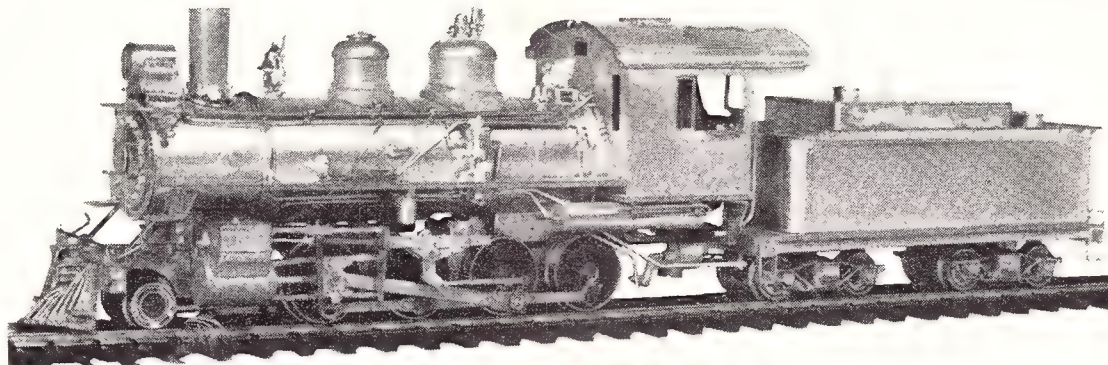
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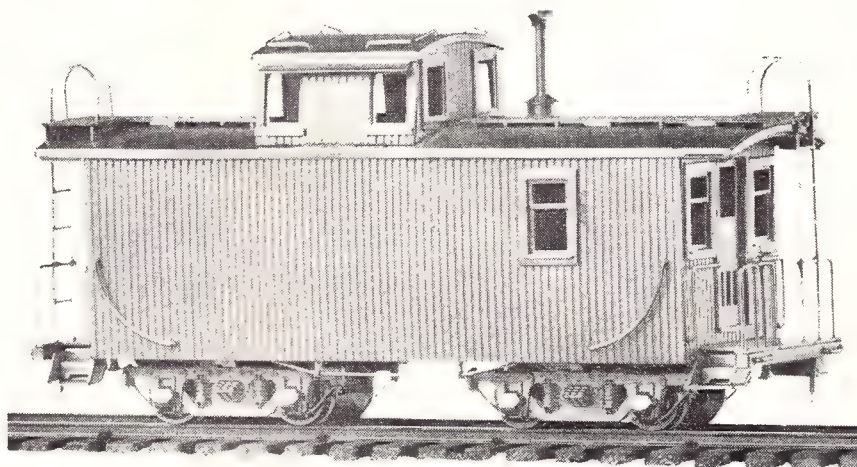
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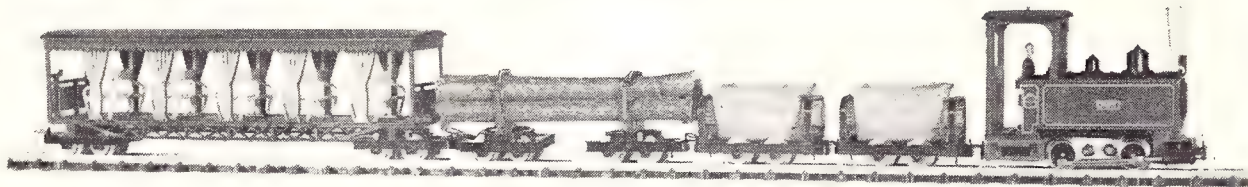
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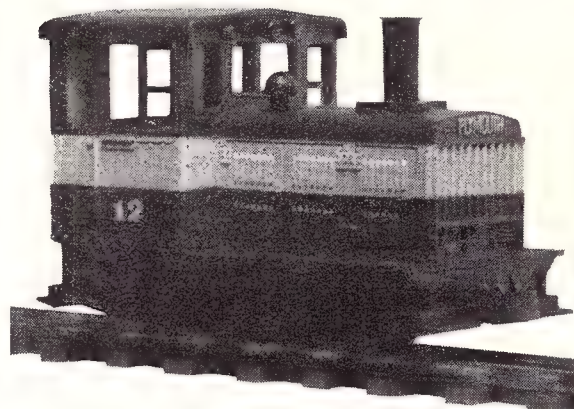
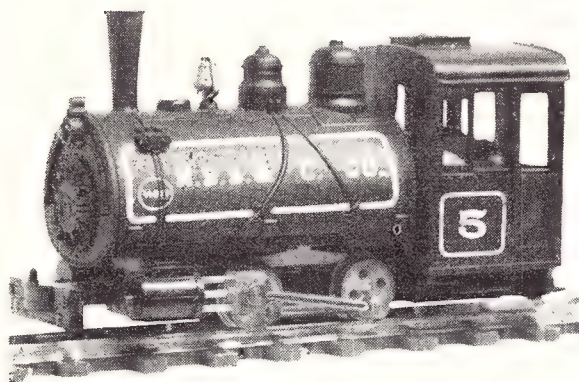
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Other News from "THE DOCKYARD" ...

Joining our range of switch gear comes the D.P.S.T. Toggle at 45c, making a total of five handy toggles now available. The other four are: S.P.S.T. at 45c; S.P.D.T., centre-off at 85c; D.P.D.T. at 75c and D.P.D.T., centre-off at 95c...

Olympia have recently delivered the fine little HO P.R.R. 'D16' 4-4-0 at \$62.55, also the C.P.R. 'D4G' 4-6-0 at \$61.00... Talking of the C.P.R., the same road's 'G-2' Pacific is just in from 'United' at exactly the same price as the 'D4G'. More 'United' S.F. 4-8-4 and Ma & Pa 2-8-0 are scheduled to arrive in stock about the time that this appears in print... In the Balboa 'Master Series' range comes a limited number of S.P. 4-6-6-2 'AM-2' Cab

Ahead Locomotive. Undoubtedly one of the finest brass locomotives in HO that we have ever had the pleasure to examine, stocks should be on sale by early October...

Stocks of the long awaited Peco 'Crazy Track' Points, in HO_n2½, are now available at \$2.15 each and most 'thirty inch gaugers' will be interested to learn that the new Sandy River & Rangeley Lakes 2-6-2 Locomotive should be available in Australia about Christmas time... From Balboa Scale Models, we expect about now more of the popular S.P. 0-6-0 Switcher at \$59.55, as well as the new S.P. 'SE-4' 0-8-0 Switcher at \$73.00...

(Cont. on page 23)

SOLE AGENT AND IMPORTER

The MODEL DOCKYARD Pty. Ltd.

216-218 SWANSTON STREET, MELBOURNE C.1.

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THE AUSTRALASIAN MODEL RAILROAD MAGAZINE

Vol. 3, No. 29, NOV./DEC., 1967

AUSTRALIA'S LEADING MODEL RAILWAY MAGAZINE

THE OFFICIAL JOURNAL OF NMRA IN AUSTRALASIA
Incorporating THE YARDMASTER, The Bulletin of the Sydney Model
Railway Society.

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Editorial

"I would also be interested to know a
bit more about signals..."

This is an extract from one of the Letters
to the Editor in the previous issue of
AMRM. In answer to this enquiry, we make
the following reply to the writer and any
other persons who have similar enquiring
minds into the Australian Railway scene.
Early next year, the SCMRA will be issuing
a Technical Bulletin giving a description of
the various types of signals to be seen
around Australia and New Zealand. It is
also anticipated that one of the electrical
sparks will be writing a descriptive article
on how he wired an exhibition layout for
signalling and in conjunction with the in-
formation from the Technical Bulletins, it is
hoped that many of our readers will take
a more practical interest in one of the most
neglected aspects of model railways. Some
of you are probably saying to yourselves,
who cares about signals, or, the dummy
signals are good enough for me. A member
of the Editorial staff spent some time
watching the various layouts on display at
the recent exhibition in Sydney, and from
the variety of exhibits on show, the most
interesting layouts were those that had
at least some form of signalling, no matter
how simple, but working so that a train
did not pass a signal until it was showing
clear. When discussing this with other
interested modellers, the general opinion
for lack of interest in signalling and any
other form of electrical refinements, it was
stated that most modellers were afraid to
tackle anything other than wiring a rheostat
to a switch and connecting it to the track.
This should not be the stumbling block to
prevent you bringing your layout closer
to the real working model of a railway
system. There are many books available
which plainly explain the fundamentals of
electricity, also many articles in model rail-
way magazines, including earlier issues of
AMRM. If you are a lone modeller, and
do not know enough about electricity to
tackle some of the more advanced facets
of train control, then I strongly recommend
to you that you join the ranks of the
Southern Cross Model Railway Association
where you will be part of an organisation
which is just as interested in helping the
beginner as well as the advanced modeller.

DEADLINE

NEXT ISSUE CLOS

1st JANUARY

On the Cover...

Go West young man! This is
Norman Coughlan's impression of
a Western Australian Government
Railways' flashlight crossing signal.

The Ab – Grand Old Lady of the N.Z.R.

by D. B. Leitch

A legend in its own lifetime is the indisputable status of New Zealand's best known class of railway locomotives, the Ab Pacifics. Talk to any engineman on the New Zealand Railways and despite the big Kb Steamer or Da class diesel he may be in charge of at the time, it is better than even money that he'll say: "But the best engine I ever worked on was the Ab." To attempt to do justice to a locomotive commanding such respect, in an article of this length, is little short of gross impertinence.

Technically, the Ab was the successor (in 1915) to the earlier A class de Glehn four cylinder compound Pacifics, but the Ab was a two cylinder 'simple' engine and was the first on the N.Z.R. to employ superheating. The class was the brainchild of the then Chief Mechanical Engineer, Mr. H. H. Jackson, though some credit for the design must also go to his chief draftsman S. H. Jenkinson who also had a hand in the designing.

The Ab's were found to be more economical on both coal and water than the A Class, when tests were made with representatives of both classes in 1916. The Ab could haul the maximum permitted express train of 20 cars where the A had previously been able to manage only 14. Ab 608 on trials ran up to 60 m.p.h. with 423 tons behind while Ab 611 proved capable of 66.5 m.p.h. with 385 tons in 1948. In 1945 710, on a train taking the famous Maori Battalion to Gisborne, made up 21 minutes on the notoriously difficult 60 miles between Wairoa and Gisborne. Many similar performances have become legend.

Between 1915 and 1926 no less than 143 of these engines were built though two were lost at sea in course of delivery from England. Eleven more were rebuilt later from the Wab tank version. The North British Locomotive Company built 85 of the original, A & G Price Ltd. of New Zealand 20, and the Addington Railway workshops the rest, including the later rebuilds.

The Ab weighs 86.8 tons in working order with 32.7 tons on the drivers. Working pressure is 180 lbs per sq. in. and at 80% of the working pressure 20,000 lbs of tractive effort is generated rising to 21,280 lbs at 85% working pressure. The two cylinders have a diameter of 17" and a 26" stroke and cylinder horsepower rating is 938. The Ab was reputedly the first locomotive in the world to develop one horsepower for every 100 lbs of engine weight. Their tonnage rating was up to 750 tons in easy country.

The Ab tender was a novelty to New Zealand when it was introduced. It was the Vanderbilt type, which apparently had impressed Jackson on a North American visit. It carried 4½ tons of coal and



Ab 823 shown shunting wagons at Stillwater Junction on the West Coast of the South Island.

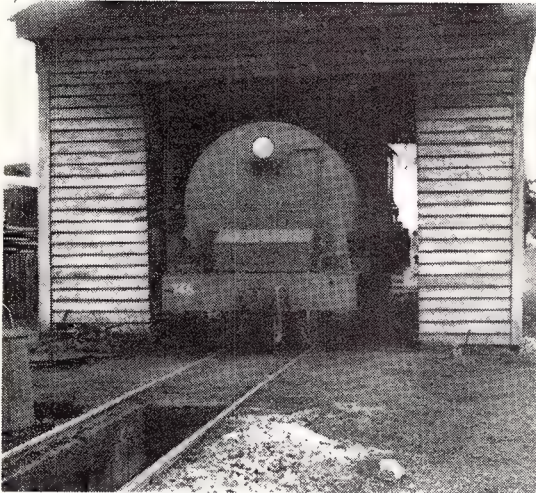
3500 gallons of water, and although this was $\frac{1}{2}$ a ton of coal less than the A, the water was an increase of over $\frac{1}{3}$ on the A, and the introduction of the Ab enabled non stop runs of over 100 miles to be instituted.

The Ab is a most comfortable engine to ride, whether hauling an express at speed, pounding up a curved grade, or making heavy weather with a long goods train. The cab is quite spacious for such a relatively modest engine, not too hot

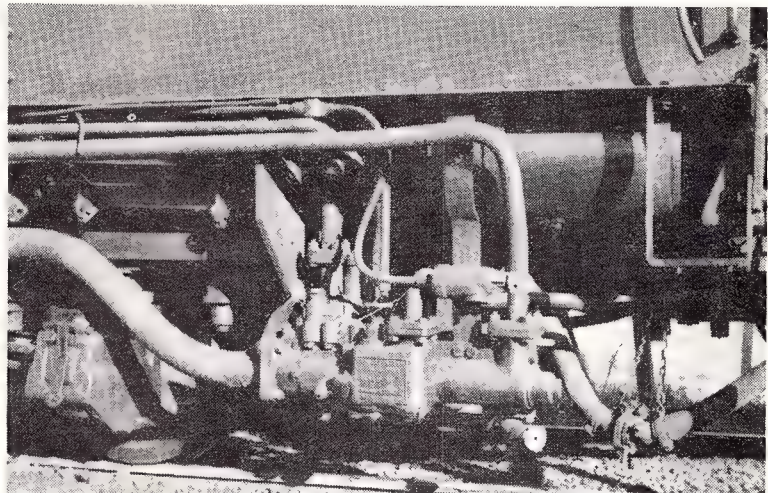
and fairly smoke free. Other engines have been bigger, faster, newer or more powerful but of the many hundreds of miles of footplate travel I have undertaken, those miles in the cab of an Ab have been in many ways the most pleasant. It is not difficult to understand their popularity with crews. There was not a single bad steamer in the whole class, some naturally were better than others, but as a class they are excellent steaming engines. They are clean and easy

Side view of 823 shown at Greymouth in January 1966, awaiting departure of morning mixed train to Ross, thirty-nine miles to the South.





Tender end view of 748 in the small Waitara locomotive shed, April 1965.



to fire, and as more than one fireman has told me "It is a pleasure to fire these engines". A good head of steam makes for a contented driver and there was little need to worry about steam when an Ab was on the head end.

The Ab's are still going strong after 40 and 50 years and more of hard work and there are very few stretches of track over which they have not worked. In the 1920's they hauled the North Island

Main trunk expresses over the difficult track of that line until the K classes replaced them. They hauled the South Island Expresses until 1940 when replaced by the J class, but as recently as 1963 an Ab has been used to assist expresses in difficult sections of this Island. Until the advent of railcars in the 1950's the Abs had done sterling work on provincial express trains. Nowadays they are confined to goods and shunt runs, but

as lately as June 1966, 832 loafed along for several miles at 55 m.p.h. with a 6 total enthusiasts special in the southern North Island.

Today, the Ab's, reduced to about half their original number, are still doing sterling work, though of a less spectacular nature. They are still the principal motive power on many South Island lines, though their passenger days are over. In a few years, with nation wide dieselisation approaching rapidly, they will be gone. In the North Island the few survivors handle only shunts and relief goods trains on secondary lines. The Ab's may go to the torch, but it is safe to say that long after the last has disappeared, the Ab will continue long in the memories of all who knew this remarkable locomotive.

THE STOKER

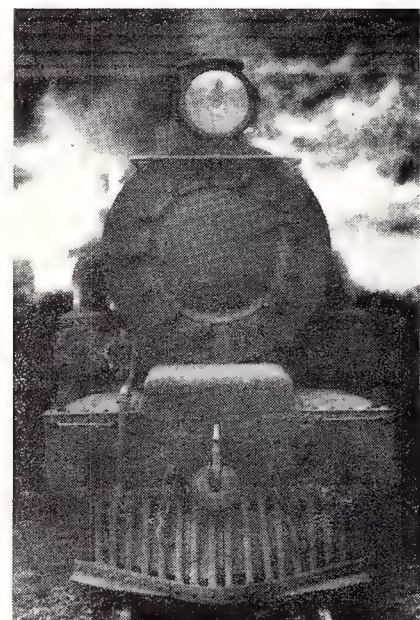
The monthly N.Z. model railway magazine that covers all prototypes and scales with a bias towards N.Z. prototypes and Sn3½ scale (3/16" to the foot). Available in New Zealand from all hobby stores and booksellers and in Australia from some hobby stores. Also direct from the publishers on a subscription basis. Individual copies 1/6 (N.Z.), 30c (Aust.), Subscriptions, N.Z. 15/- p.a., Australia \$2.20 p.a., elsewhere 17/6 (N.Z.) p.a.

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ALL CURRENCIES ACCEPTED AT CURRENT RATES OF EXCHANGE.

Head on appearance of Ab 748 photographed at Waitara in April 1965.



THE REVIVAL OF O-GAUGE

You will have read in your NMRA Bulletin, I hope, that an effort is being made to organise an O-gauge column to foster interest in king-size modelling. If you have not seen or read these announcements, well then, I suggest you join the NMRA without delay and get with it. You will find it well worthwhile. And in case you do not read any overseas model railway magazines, it will be of further interest to know that they publish news and reports enough to indicate that the craftsman's gauge is enjoying a very healthy revival indeed, and is emerging from its hibernation.

Years ago, O-gauge dominated the hobby almost completely, but after the war the smaller gauges overtook the slow, slogging O-gauge and it just disappeared. The manufacturers turned to the smaller gauges due, no doubt, to the cheaper tooling and lower costs of the smaller items required. As these were all that were available, embryo modellers had no option or other choice but to go HO, or smaller. Several firms like Athearn and Marklin and even Hornby forsook O-gauge for the smaller line. This seriously affected things. You just couldn't walk into any department store and purchase an O-gauge outfit, as in the old days, to set you up.

While O-gauge disappeared, the actual O-gauge modeller did not. They still continue from way back and they don't come any better. The vast majority of my oldest model railway friends are O-gaugers and after enjoying their friendship for 30 or 40 years or so, I cannot name one who has deserted his original choice.

The boot is now on the other foot. I have recently heard of, and met, a few enthusiasts who have converted to O-gauge. Arthur Burns, of Sydney, recently sold all of his extensive HO layout and re-invested in O-gauge. In a very short time, he has acquired an amazing amount of rolling stock and is in the throes of building an extensive indoor-outdoor layout which, he claims, will rank in the world's top 10 model railways when completed. From what I have seen, I wouldn't doubt it. There is nothing finer than O-gauge outdoors and the pleasure it gives must be experienced to be understood.

My latest G.O.G. list shows Peter Denny of Buckingham Branch Line fame. Mr. Denny's layout is described in the August 'Railway Modeller' and the photograph on page 231 must be one of the best ever published — anywhere! Don't miss it.

A big fillip to the O-gauge revival is shown by the introduction last year of an O-gauge Hymek loco, two trucks and track by Tri-ang, followed by an O-4-0 diesel shunting loco, a couple more trucks, more track and a turnout this year. Another wonderful breakthrough for O-gauge is the recent new flexible track-work by Peco, a very big name in the HO world. This track is made in nickel silver or plated steel rail and has re-

ceived very high marks in the various trade reviews. I am hoping they will produce some of their wonderful wagons in O-gauge. Another firm is tooling-up to supply turnouts in all forms to align with this track and Kays — the bulwark of 'scale' HO in England — have started to produce wagon kits for Spiers, whose wagon kits and fittings are the ultra amongst the elite in O-gauge.

But the most amazing thing about the revival of O-gauge in the last decade is the formation of an active, a very active Gauge O Guild in England. Organised about 10 years ago and after a slow start, it now boasts of over 1400 members all over the world, all active and keen. The Guild has many practical benefits, including its own tie, but the most interesting is a quarterly Gazette. This, like "The Booster", started off as a duplicated sheet and gradually grew into a compact, printed magazine and is one of the few model railway publications devoted to the one gauge or interest.

The Guild is also the largest organisation in the model railway world united by the one common bond and catering for the one purpose. The Gazette carries the advertisements of those firms who matter and those that cater for O-gauge, be it mechs or motors, wheels, bogies, axle guards, track — anything you could ever want.

As we go to press we learn of the death of John Robinson on October 30th who, despite a long illness, continued writing articles and corresponding with his numerous railway friends, amongst whom your Editor was proud to be numbered.

It is not necessary for you to send overseas, because most things you would require are readily available here, and as a start, I recommend you to send a stamped addressed foolscap envelope to the Model Dockyard and ask them to send you a list of their O-gauge material. It is as comprehensive as you could wish for, consisting of 10-12 pages and provides everything you will ever need from a dog-spike to a U.P. "Big Boy", all except sleepers less than 2-feet wide!

Parts come from England, U.S.A., Japan, but more important, the excellent BPR castings, made here in Australia are readily available again. Nor do these come any better, but I am sorry that Fleet products are not listed. Where are you hiding Gordon? A walk around the Dockyard will amaze you at the amount of O-gauge material available and bears out what Charles Buchanan said a couple of years ago in these pages that the Model Dockyard was the best hobby shop in the world.

Locos of local prototype are a problem but there are always plenty around, proving that they are not impossible to build. It is a bit difficult when your are a

By John Robinson
GAUGE O GUILD 698

'kitchen table' engineer and what I wouldn't give for a V.R. D3 or R class or a NSWGR 38 class!

If you are interested in English prototype, you will be well catered for from the advertisements in the G.O.G. Gazette. Several companies issue periodical lists of new and secondhand goods which they will send to you air mail for a nominal sum. If you reply air mail and request the firm to reserve something you fancy, you have a 50-50 chance of getting it.

One of the "big" names in O-gauge before the war was the Leeds Model Coy. They supplied practically everything you'd want. Well, they are back in business. Just recently, a couple of capable and energetic blokes have taken it over and revised the whole business, including a reduction in prices. They now trade under the name of Ellessee and their price list is a must for your reference. Cast iron loco driving wheels are still available from Bonds and even after all these years are still used by the discerning loco builder.

If your tastes are for Yankee prototypes you will find all, and more than you want in the catalogues of All Nations Hobbies, Boxcar Ken, Walther's, Kemtron etc. Kemtron's have a kit for a beautiful little loco I would like. It's a pip. At this year's Toy Fair in New York, All Nations Hobbies — who advertise "over 1000 lines" or "items" — introduced two new business-like motors and a new loco kit, a very nice looking job. La Belle coaches are known to you all. Have you ever seen detail like it? They all have faith in O-gauge.

The A.M.R.A. always put on a good display at their annual exhibition which you saw recently, of course, and the Sydney M.R. Club have a large permanent layout, fully signalled and some super-duper models are to be seen there. Write to the Secretary for an invitation.

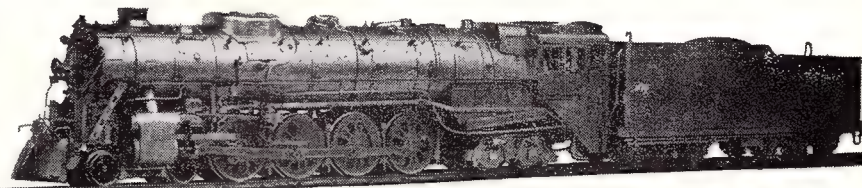
There are many healthy signs that O-gauge is making a vigorous 'come-back' and if you are looking for a scale in which you can model, really model everything and every detail able to be seen without a microscope or seen in a photograph only, then O-gauge is for you.

All being well, as my doctor says, I hope to bring you more news, views and articles in future issues showing the trend and what can be done in king size gauge. In the meantime, be sure to write to Mr. H. Bower, Hon. Secretary, Gauge O Guild, 81 The Drive, Bexley, Kent, England and request a membership application form and a sample copy of the Gauge O Guild "Gazette". Please be sure to include sufficient Commonwealth Reply Coupons for return postage.

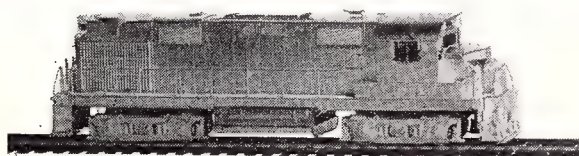
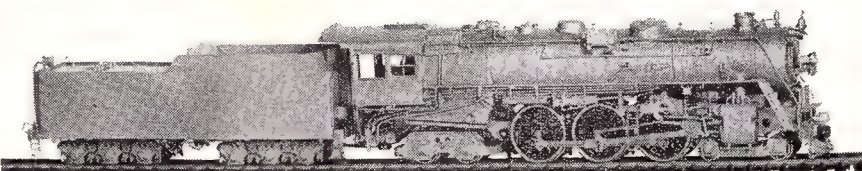
I would like to hear from active O-gaugers, especially those with a layout who would not mind demonstrating the advantages of the scale to the infidels and unbelievers — and visitors — by appointment, and particularly from those with experience and know-how to pass on so as to maintain interest in the revival of O-gauge.

PROUDLY PRESENTING— NEW MOTIVE POWER IN HO —FOR ALL CLASS OF SERVICE . . .

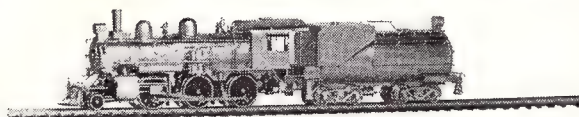
MILWAUKEE ROAD 'S-2' 4-8-4: The 'S-2' was heavy power on the Milwaukee Road and this Northwest Short Line quality model reflects all its fine power and beauty in HO scale. Powered by Pittman DC-70 Motor, with 74" drivers accurately sprung for proper action. Pre-blackened frames. Lost wax and coined details. Unpainted, honed finish. Length, 15½". Weight, 2lb. 3oz.. **Price: \$105.00.**



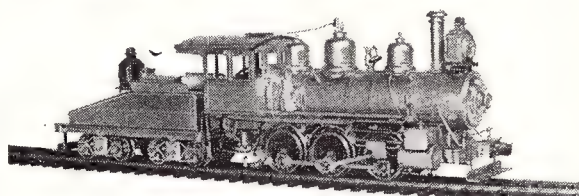
MILWAUKEE ROAD 'F6a' 4-6-4: A brand new model in the P.F.M. line, United's masterful recreation of the Milwaukee 'F6a' exemplifies both the fulfillment of steam capability and the modeller's art. Ornatly detailed with Cal-Scale castings and powered by Pittman DC-70 Motor. 79" drivers. Unpainted, honed finish. Length, 13¼". Weight, 1lb. 11oz. **Price: \$78.50.**



S.P.-T. & N.O. 2-6-0: Our first stocks of Fujiyama's fine Mogul! Equipped with a number of especially designed Cal-Scale castings; powered by Fujiyama's FJ-135 Motor and fitted with 63" drivers. Pre-blackened frames. Unpainted, honed finish. Length, 9½". Weight, 14½oz. **Price: \$52.30.**



ALCO DL-640 (RS-27) DIESEL: The big 16 cylinder B-B road switcher, expertly reproduced by Kumata in every external detail. Double photoengraved body, finished with precision brass coined and machined fittings. Satin Finish. Powered on all wheels, through enclosed, axle hung worm gear boxes, connected by universal couplings and driven through double reduction gears. Length, 8". Weight, 11lb. **Price: \$47.25.**



C.M. 0-6-0 SWITCHER: A fine quality 1887 Switcher of Schnectady Locomotive Works origin. Capable of negotiating a 10" radius curve. Both headlights are operating. Finish includes reverse rod-rod from cab to cylinders, cylinder cocks, bell, pump, brake cylinder and rigging. Unpainted. Length, 7½". Weight, 18oz. **Price: \$60.00**

'PT' CENTIPEDE TENDER: For those who have purchased the N.Y.C. 'J3a' Hudson or the recent 20th Century version (more of which are coming, along with the Empire State type), this long distance Tender has been specifically introduced. Raising the fuel capacity to 46 tons, as compared with the 28 tons of the standard 12-wheel Tender, these massive 14-wheel Tenders were substituted to cut fuel stops on fast runs. **Price: \$22.30.**



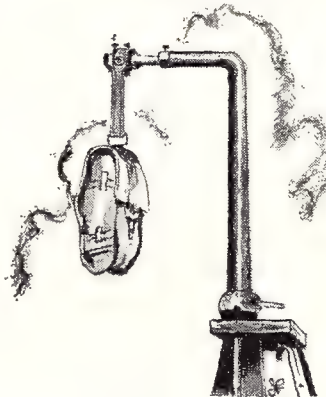
The MODEL DOCKYARD Pty. Ltd.

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MAIL BAG



Sir,

S Gauge

Because of the onslaught of a few million wogs rasslin' for my carcase, I was unable to show any S-gauge materials at the recent A.M.R.A. exhibition in Sydney. I apologise to all my friends for this absence which was most disappointing because I had been looking forward to renewing acquaintances again and demonstrating further progress in the S-superior gauge. To add to the disappointment, I had received many offers of assistance for this year's exhibit, that it is most embarrassing to have to leave such good friends high and dry. Never mind. There is always next year.

Considerable progress has been made overseas in S-gauge during the year, the most important being the revival of the American Flyer Line, thanks to the wane in slot car racing. The A.F.L. is to S-gauge what Tri-ang is to HO and although I am not quite certain yet as to the exact take-over details, all the old lines are to be revived. Most A.F. locos and rolling stock are to scale except running and draft gear and lend themselves ideally to rebuilding and the addition of further detail.

The S-Gauge Society in England is stronger and more active than ever. Did you see the S.R. Schools class, 4-4-0, built by Bernard Wright and recently illustrated in an English magazine? Have you ever seen anything so good? S-gauge, of course. Bernard has under way a series of 10" x 8" coloured pictures of locos. He makes the blocks for them and if his block making is as good as his modelling, you can imagine how good the prints will be.

No. 1 is of a Gresley Pacific, "Quick-silver" and No. 2, "Avondale Castle". At 5/- stg., plus postage, these are super-value, and may be obtained from Bernard Wright, 47 Kingston Rd., New Malden, Surrey, England (see Model Railway News, August, page 400). Eric Manning, 81 Riverview Rd., Elwell, Surrey, England, is secretary of the S-Gauge Society and will attend to your inquiries.

The National Association of S Gaugers in USA has now been organised on more formal lines. Dues are \$US3.00 for all time and this entitles members to a badge, cloth emblem and membership card. Write to Russell Mobley, Gen. Director N.A.S.G., 8030 Boundary Ave., Anchorage, Alaska 99504. The circulation of the S Gauge Herald is enjoying a well deserved increase and still continues to bring all the latest news and information about the S-killful gauge. The Year Book now lists over 1000 names in the Directory with

scads of extra advertisers showing faith in this gauge with new lines. Two firms are having Jap locos built and these are due out any time now. Both are striking 2-8-0's, one being Sn3. Be sure to send your \$US2.75 subscription to S Gauge Herald Inc., Box 105, Oradell, N.J. 07649, U.S.A.

It is interesting to note that S-gauge is the only gauge or scale with two magazines, devoted to the one interest listed in the NMRA Periodical Index.

Perhaps the most outstanding event of the year is the publication of a catalogue for S Scale Locomotive & Supply by Claud Wade, a devoted and dedicated S-gauger. No matter what gauge you prefer, you will find this catalogue of immense interest because it lists and explains all manner of tools and techniques, soldering, silver soldering, lost wax casting, epoxy, notes on wheels and drivers — the characteristics of different metals, "weighting" locos and so on. It covers more ground than half a dozen magazines, all for \$US1.15. Drivers, frames and parts for no less than 19 locos are listed and if you can find a more interesting and informative catalogue in any gauge, I'll eat my hat. No kiddin'. Send your bank draft or postal order to S Scale Locomotive and Supply, 7120 Oreon Drive, St. Louis, Mo. 63121, U.S.A.

In my previous article, I recommended you to make a mock-up, just to see what makes S-gauge the s-atisfying gauge. To save you the trouble, Kinsman Scale Models of 487 Swains Pond Ave., Melrose, Mass. 02176, U.S.A., now put out a special basic kit, a whale of an idea, for a 40-ft. reefer or double sheathed box car comprising floor, ends, sides, roof, blocks, etc. all cut to length, for \$US1.25 ea. or \$US2.25 for 2 kits or \$US5.00 for 5 kits, plus postage. You can't lose with these.

Just prior to the exhibition, I received some pamphlets from S and P Distributors describing their die-cast loco kits and a gondola and flat car. These are first class and if you forward a stamped addressed foolscap envelope, I will send you a copy by return mail.

JOHN ROBINSON.

Box 460, G.P.O. Sydney,
N.S.W. 2001.

N Gauge

Sir,

I would like to know if there are any active 'N' gauge modellers in the Albury-Wagga areas, and whether N.M.R.A. have any standards for this scale.

A. BROWNE.

"North Waverly", Pleasant Hills,
N.S.W. 2737.

Why?

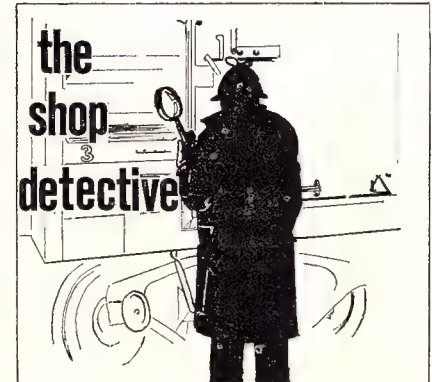
Sir,

As a new member to the SCMRA I would just like to say that when a person has to pay \$9.50 for a year's membership, and then has to wait several months before he receives anything is a bad state of affairs. Surely several sets of the initial correspondence that a new member will receive could be kept by the SCMRA so that a new member wouldn't have this long period to wait.

Secondly, I would like to say that the "Railroad" is a terrific magazine and the price is very reasonable, however, if it could be just a bit more punctual in its publication then it would be perfect.

JOHN W. GREEN.

Richmond, N.S.W.



When in the City next take time to visit Melbourne Sports Depot at their new location in Elizabeth St. On display is a HO layout built by three members of Flinders Model Railway Society, which features 'hard shell' scenery, intricate proprietary point work, and industrial type plastic building kits. Quite apart from its excellence from a display point of view, the layout appears to provide adequate operating possibilities. I like its distinctly uncluttered appearance. At M.S.D. you will also find inspiration for your Christmas gifts. There's 'O' scale tinsplate, or plastic battery operated — to start junior off in the hobby, various kits for 10 or 12 year olds (cars, locos, buildings), and for yourself those delicious Rivarossi locos.

Anyone for 'N' scale scratchbuilding? Model Dockyard can supply motor, drivers, and leading and trailing trucks by Sakasui. This line of RTR locos and rolling stock, both passenger and freight, has expanded to such an extent, that your writer is seriously considering construction of a coffee table layout. Perhaps you could use the idea for a vacation project. Track and points available from the Dockyard.

Also expanding at a great rate is 'O' scale scratchbuilding parts. Lots of BPR detailing parts, and North Eastern has come good with scribed siding, timber shapes, and wood bolsters. HO, of course, remains most popular scale, but HO 3 foot, TT and traction, all are well taken care of in Dockyards huge stocks. Here you must find that special gift for that special mate, be it an RTR loco, a craftsman kit, or first class reading matter. Remember that you can rely on your year-round hobby dealer for sound advice, ethical dealing, and after sales service.

The compliments of the season to all.

Control Panel

Sir,

I remember the mention of control panel design stated by the author of one of your articles. I have been waiting impatiently for this, but it doesn't seem that it will be published. I am concerned because I fear that this modeller's method may be simpler than the N.S.W. Railway's method, from which I have begun a prototype.

STEPHEN MANSELL.

Kirrawee, N.S.W.

THE GOOD GEAR

By EDWARD WARD

When scratch building locomotives with small driving wheel diameters, the problem of obtaining a smaller-than-available gear to match an available worm is frequently met with.

Recently, while building a model of the Queensland Railway 6DII½ 0-6-0T which, with 2' 6" drivers, is a problem, I made a gear to suit the worm on a Tri-ang X 500 motor.

I purchased the correct gear for the worm on the motor. It had a diameter of .450", whereas I could only use a gear of .300" diameter. So I required only 2/3 of the dia., and consequently, only 2/3 of the circumference. I made a suitable gear as follows:

In your lathe, chuck a piece of brass rod, of diameter at least equal to the gear, and face it with a small boss of the internal diameter of the gear. With the rod still in the chuck, carefully spot solder the gear to the boss. Use as little heat as possible. This requires placing a very hot iron on the job briefly. Cool the work with a damp cloth quickly. Apply the solder to the teeth of the gear, as the hub is about to be bored out.

Bore the hub out, leaving as thin a web of metal connecting the teeth as you dare. When you have bored the gear out, remove the rod from the lathe, and sweat the rim free. Work out what percentage of the diameter you don't want and remove that percentage of teeth to the nearest tooth.

Place a piece of brass rod of diameter greater than the new hub you will need, in the lathe, marking the spot where No. 1 jaw of the chuck goes. Face it and true it.

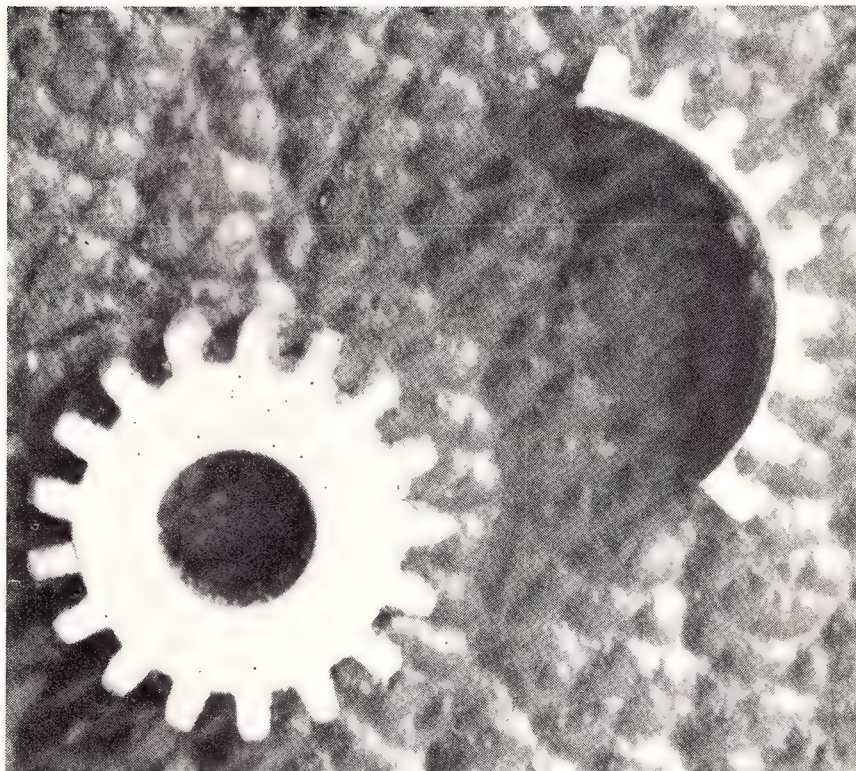
Now wrap the section of gear rim around it. There should be a gap between the ends of the rim. Accordingly, reduce the diameter of the hub until the ends of the web meet. Take care to leave the appropriate gap between the two end teeth.

Now, remove the rod from the lathe, and clamp it in a vyce. Put a strong rubber band over the handles of a pair of long nosed pliers, and grip the two end teeth of the gear, drawing the teeth tightly around the hub. Now

HINT

Many locomotives have bogies or pony trucks which are prone to derailment. A small rectangle of ¼" or ⅜" foam plastic, painted black, contact-cemented to the bogie frame and bearing some weight onto the loco frame stops this fault. It also helps the bogie or truck to do what it was designed to do on the prototype namely pull the locomotive around the curves. The appearance of the locomotive is also improved as so many models have great expanses of light under the frames.

—R. G. BEATH.



sweat the parts together with plenty of heat and flux. When you are sure the solder is between the parts and not just on the ends, place the rod back in the lathe, with the previously marked spot against the No. 1 jaw of the chuck.

Drill the gear to the intended dia-

meter, face it, cautiously machine any eccentricity out of the ends of the teeth, and part it off. Using a warding file, carefully clean the solder from the teeth of the gear.

A similar technique can be used for gears of larger than original diameter but with a little more difficulty.

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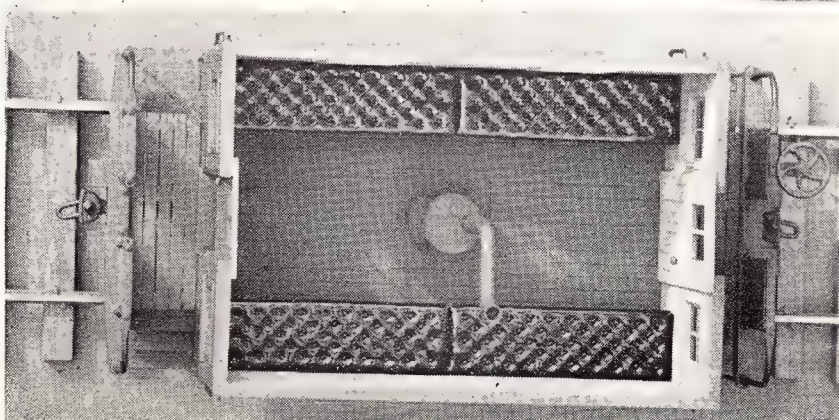
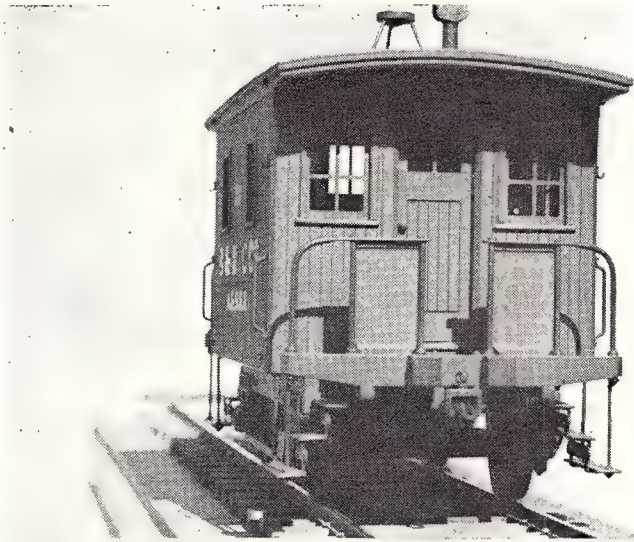
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113 Parramatta Road, Concord, N.S.W.

CABOOSE CONTEST RESULTS



David C. Ashton, Chairman of the contest, sponsored by The Brotherhood of Railroad Trainmen, has announced the results of the competition.

1st: Stuart Barker

2nd: David Peterson

3rd: Charles Huggard.

Prizes in connection with the contest were \$US100, \$US50, and \$US25.

The entries were displayed at the recent Model Railway Exhibition in Sydney. Judging was carried out with regard for the N.M.R.A. Achievement Awards Programme Regulations.

Mr. Ashton said that all entries were of very high standard and that it was a pleasure to see that scratchbuilding was of such excellent quality in this country. The models which won first and third place were built to $\frac{1}{4}$ " scale and the model gaining second place was built to HO scale.

Mr. Ashton congratulated the prizewinners.

After the judging we questioned Mr. Barker on his building methods. He said that the caboose was constructed almost entirely from sheet styrene, being laminated where necessary. Scribing was done by hand using a hand-made tool. Other materials used were sheet metal, (in steps, coupler and brake springs) and wire.

The only commercial parts used were the wheel sets (from a KTM truck) brake wheel, body springs, Kadee nut, bolt and washer castings, brake chain and entomological pins. M.E.K. and Aifix styrene cement was used for cementing styrene. Araldite, some soldering and riveting with pins were used for cementing and fixing other materials.

Grab irons, lamp hooks, and roof seat are fixed on with pins. Windows were made using a two piece jig made from sheet metal. Roof carlins were cut to shape but sheet covering material was shaped over a piece of curved metal using heat.

The retaining nut on the brake wheel and the nuts on the signal cord wheel, steps and end rails are made from sheet metal (they are not threaded). Use was made of Kadee nuts, bolts and washers and small pins to simulate nuts and bolt heads in appropriate places. The door handles are the heads of lill pins. All but one of the journal box lids open.

Our photographs show end and side views of Stuart Barker's caboose. The lower photograph shows the interior with its stove, plastic covered cushions and scribed wood floor.

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SL-91X R/Hd 2ft. radius	2.25
SL-92X L/Hd 2ft. radius	2.25
SL-93X Short Crossing 24°	2.15
SL-94X Long Crossing 12°	2.75
SL-97X Y Point	2.15

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SL-10X Metal Rail Joiners 24	38c
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SL-17 Stud Contact Strip, Track 6ft	35c
SL-18 For Points 4ft.	35c
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SL-37 Track Cleaner	35c
SL-40 Rail-built Buffer Stop kit ...	30c
SL-41 Sleeper-built ditto	35c
SL-70 Point Motor	1.25
SL-71 Adaptor Base for using it above baseboard	25c
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We trust that all Readers may be assured of our very sincere good wishes for Christmas and the New Year.

The Model Railway Hobby gives us much pleasure as we know it does you, and at this time of year we can all look back on a year of satisfaction for a job well done — or only just thought about. Our Hobby knows no limits. It caters for all comers and all tastes, of all ages, races, religions and sexes, from those who only think, to those who build the most beautiful locos from scratch. We enjoy every moment of it. We thank the members of the Model Railway Associations, Office-bearers of clubs and those in the trade for their continued efforts to make our hobby better known, more respected and a joyous thing to be in.

May your Christmas be free from anxiety or stresses or strains and may 1968 please bring us Peace and good health for everyone.

— AUSTRALIAN MODEL CRAFT CO.,
(Sgd) Bill Gardner & Staff.

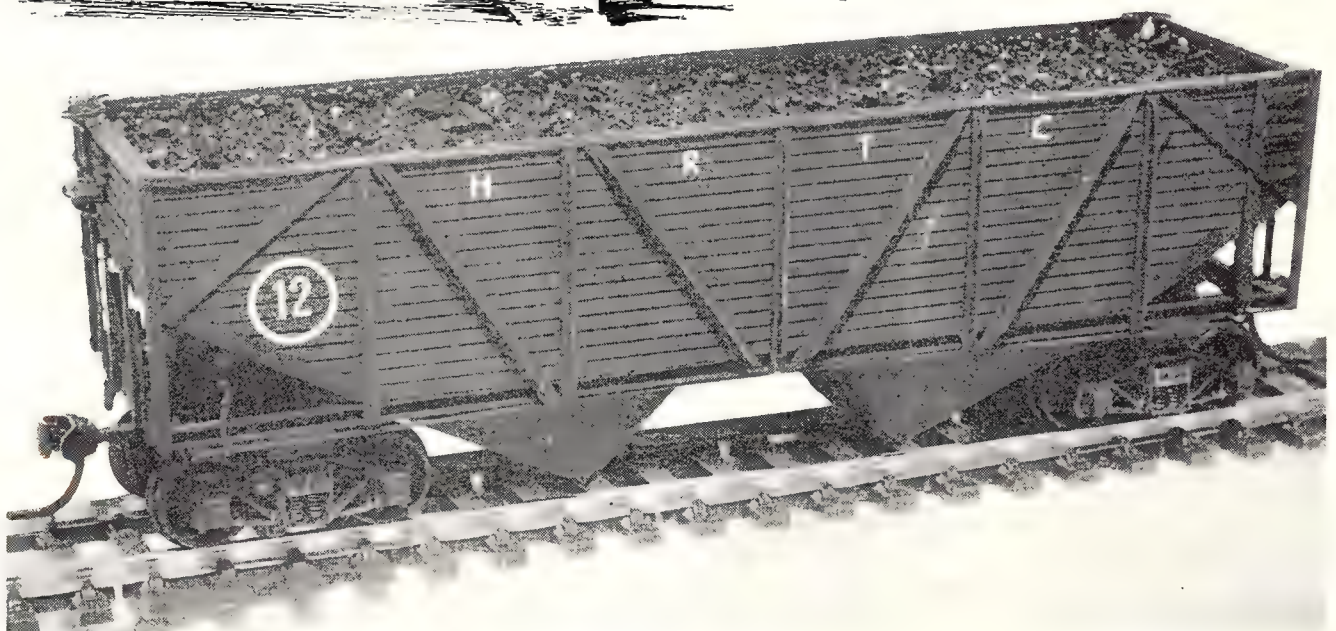
"The Model Railway Newsletter" our little publication, got a sock in the nose in October, but seems to be coming good again in November. Recent issues contained No. 22 Late September Australianising a Rivarossi 4-wheeler; The Rivarossi No. 1255 2-10-2 Loco in description & picture; 2-railing a layout; The New Rivarossi J Series Peco Lists & etc.

No. 23 Early October — The Gosford Loop in picture; A Grant cartoon; Kibri, Scenimat & Tannen Price Lists; Gem 12mm Narrow Gauge lines illustrated & listed; Some miscellaneous Masasco (Scenic) lines listed; A review of a K's 6-wheeler coach; A Track Plan; An exciting story from the Railways; Making Black Boy Trees.

No. 24 Late October — Reviewing Rivarossi Kit for B & O 0-6-0 with slope back tender; an interesting story from the Railways; Full List of newly introduced N & HO lines from BUSCH. Kibri N Gauge illustrated page; comment & current news (Orange cover).

Newly out in October — PECO in Australia No. 4 — 8 pages in Blue Ink; Price 5 cents. This contains full HO/OO List with illustrations.

See You, Next Year!



William C. Fraser sends this photograph of one of the models on display at Melbourne Institute of Applied Science. It depicts "Puffing Billy" NA class Loco in 1/48 scale.



Here is an opportunity for readers to submit photo stories of their layouts. Send glossy 5" x 4" prints to The Editor, S.C.R. Publications, 189 Homer St., Earlwood, N.S.W. Unused prints will be returned if accompanied by a stamped self-addressed envelope.

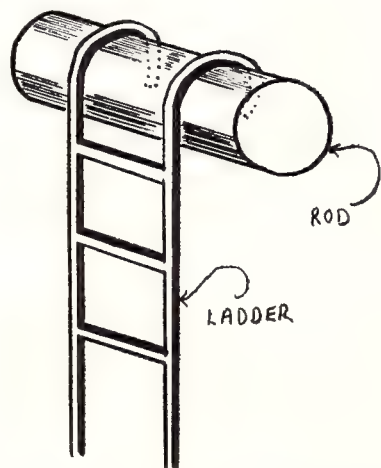
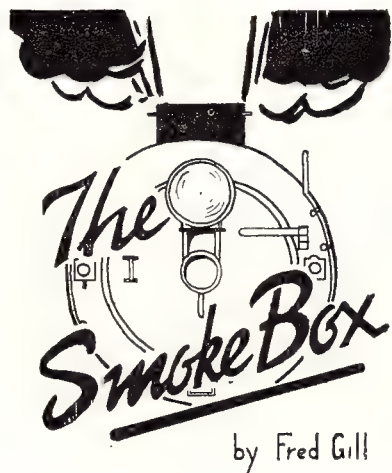
Here is one of the ten coal hoppers Edward Ward built for his Hoopsnake River Tramway Company. These cars are mentioned in his article "How to Fill a Traincase" in AMRM Feb./March 1965.

The Model Railway Exhibition each year in Sydney would not be the same without the huge TT layout of Len Marsden & Sons. Ever growing in size it now has over 1000' of track and includes an Eggerbahn narrow gauge line.

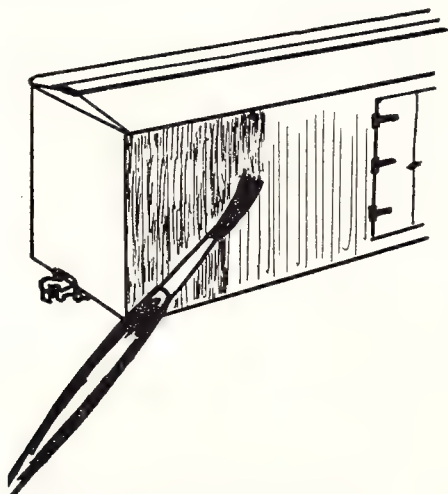
(Photo Graham Larmour).

Every now and then we receive a packet of photos from Mac Titcher of Dandenong, Victoria. It never contains any information so we guess his layout must have a mining village. Use a magnifying glass to see the fine detail.

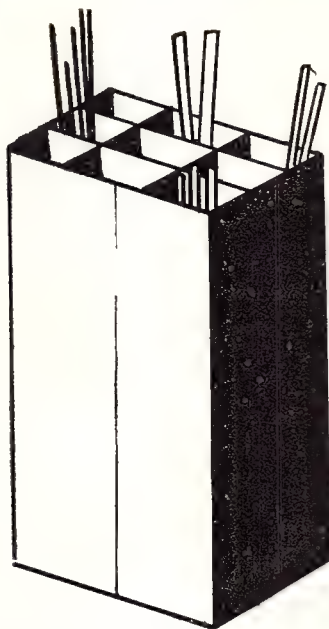




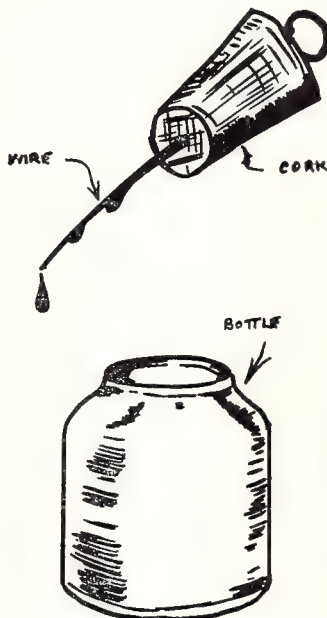
To bend ladder stock for loco tenders, the method shown is one of the best. Use a metal rod of the desired diameter, then slowly bend the ladder stock around it.



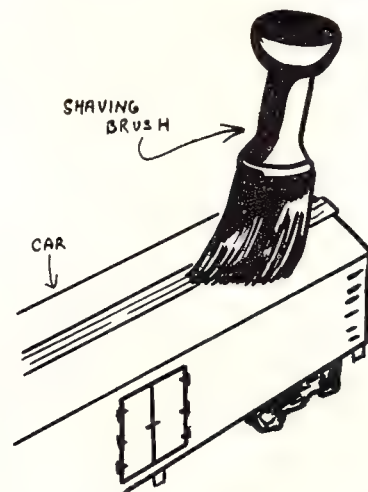
Weathering or aging plastic cars is easy if you use acetone, brushed on with light, vertical strokes.



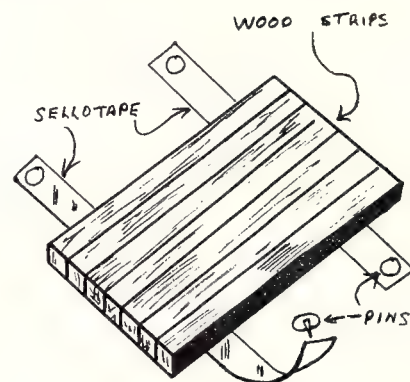
For storing such things as stripwood, metal rods or rail an old fluorescent tube carton is invaluable. The cardboard partitions make perfect dividers and cartons can be cut to any length.



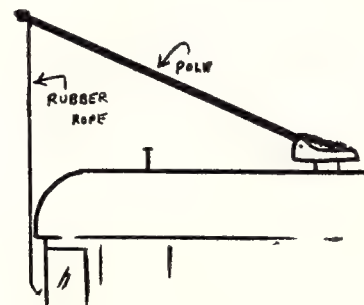
A good method of making an oiling attachment is shown. Take a piece of strong wire and sharpen it to a point, push it through a cork and then bend the plain end into a "handle." This type of "oiler" allows a drop of oil to run off slowly and it means a much lesser oiling job.



A shaving brush makes a fine duster when cleaning cars or locomotives. Wash the bristles out in a soapy solution, as this rids the bristles of the dirt and it also keeps them soft.

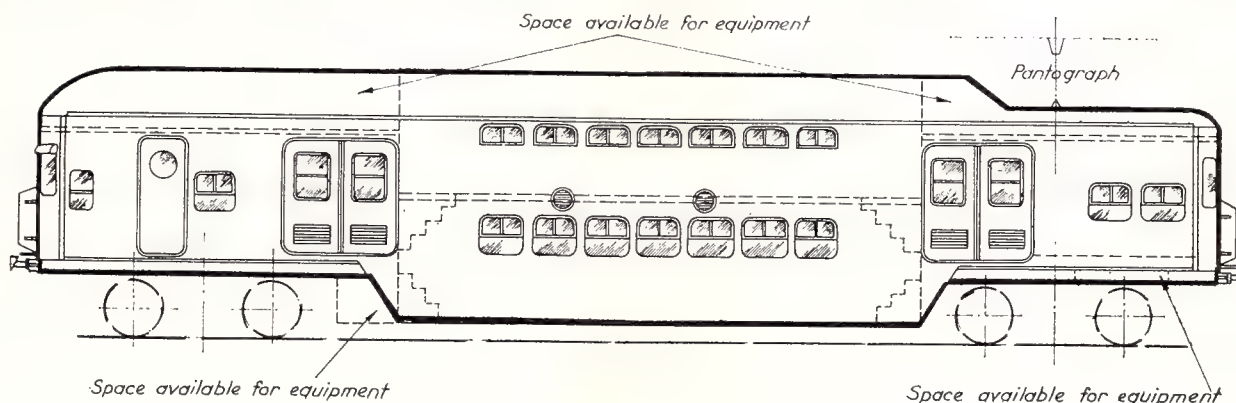


When fabricating floors for flat cars, the pieces of planking can be held in place on pieces of Sellotape. The tape is pinned to a baseboard with the sticky side up.



As a final touch of detail on trolley cars, make the trolley pole rope from thin elastic, such as that found in the top of sox. The trolley pole spring counteracts the pull of the elastic, and when the pole is let down, the elastic pulls itself together.

DOUBLE DECK POWER CARS FOR N.S.W.G.R.



Contracts for four prototype double deck motor carriages to supply traction for the double deck trailer carriages already operating in the Sydney metropolitan area have been let by the NSWGR.

When in service, in about 12 months' time, the combination of double deck motor carriages, and trailer carriages will have a total carrying capacity of 2,250 passengers in an 8-car set.

This is an increase of 1,050 passengers over the conventional 8-car single deck trains now moving the peak hour traffic in the Sydney metropolitan area.

The power equipment and the type of bogies installed on each of these four prototypes will be different in some degree. This will make it possible to thoroughly test several possible combinations of equipment, under actual running conditions.

This is considered the most practical

method of achieving maximum efficiency from the space restrictions inseparable from the design of double deck carriages.

Externally, the four power carriages will be similar in appearance to the successful double deck trailer carriages.

On a single deck motor carriage the motor and ancillary equipment is usually installed in the space between the bogies.

The only large area of space left over from the trailer car design is in the roof, but not all equipment is suitable for roof installation. Equipment such as compressors and generators vibrate or hum, so other spaces must be found for these, preferably under the carriages.

Some of the electrical equipment can be located between the partition and the last seat at each end of the lower deck, but it will still be necessary to

shorten the double deck section by removing one row of seats on both the upper and lower decks.

It was the problems associated with the best space utilization while still retaining the main features of the successful double deck trailer cars, that lay behind the order for only four prototypes at this stage of the power car's development.

Power-operated doors and smooth-riding "air-bag" bogie suspension will be standard equipment.

FOR THE PROTOTYPE FAN

This is one of those pictures that will be rarely seen again. At Easter, 1964, the Australian Railway Historical Society ran a tour to Quorn Hawker Port Augusta Maree and Alberrie Creek. Our picture shows a 520 Class 5'3" gauge loco and a T Class 3'6" gauge loco standing together at Terowie.

Photo by Robert Gillies, Unley, S.A.

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3-RAIL AC. TO 2-RAIL DC.

By D. A. CUTCLIFFE

The following article describes a simple method of converting Marklin, etc., to operate on two rail D.C. It is intended for modellers like myself, with no technical experience and using simple tools. Using this method anyone, and I mean anyone, can carry out conversions of this type.

Firstly, choose the loco you wish to convert, remove body, valve gear, side rods, etc. This is a simple procedure on all Marklin type locos. Store all parts in a safe place.

The next step is to remove all wheels on loco and tender if the latter is present. It is necessary to remove all wheels whether drivers or not. Hold the loco chassis firmly, place punch over axle and tap lightly with hammer. The rest of the loco can be placed aside, as all we will need at present are the wheels and axles.

If you do not like the deep flange on the wheels, now is the time to rectify them. I did this myself, by chucking an axle with wheel into a $\frac{1}{4}$ " chuck of a power drill fixed in a horizontal drill stand. I used small files (4") to take the excess flange off while the wheel was spinning. Jeweller's files are too small for this job. Using this method may not achieve the N.M.R.A. R.P. 25 contour, but my wheels will run on at least code 70 track. Use your N.M.R.A. gauge frequently to check flange depth.

Put aside wheels with gears attached and half the remaining wheels, only one side of the loco has to be insulated. If you are converting a 4-6-2 or similar loco do as I did and insulate all wheels on the leading truck. Take all wheels to be insulated and insert an axle on each. The next step is to cut alternate spokes on each wheel (to be insulated). Fix the wheel in a vyce and cut through with the jeweller's saw. Do not use too fine a blade as these cuts have to be filled later on with Araldite. The best place to cut the spokes is about midway between rim and axle. Make sure no flakes of metal are left in the cut as these will cause a short circuit.

After all alternate spokes have been cut, mix a small amount of Araldite, enough to cover a 20-cent piece is plenty. Using the point of a fine needle and with patience and care, gradually fill all cuts with Araldite. Work from both sides of the wheel. Don't hurry this job as it's the most important of

all. Make sure the whole space is filled and the Araldite comes up level with each spoke.

When all the wheels are completed put aside and allow to dry for at least 24 hours. Do not oven dry the glue, as I did with my first conversion, the plastic tyres on some wheels have a peculiar tendency to shrivel up and break.

After the Araldite has thoroughly dried take each wheel again and cut through the remaining metal spokes. Repeat the process of filling the cuts with Araldite using the needle point. Once again allow to dry thoroughly before proceeding. I leave my wheels several days to ensure the glue has set hard. We now have a solid wheel insulated from the axle side rods and valve mechanism.

BASIC TOOLS

Jeweller's saw & blades (not too fine)
Modeller's hammer or tack hammer
Punch
Files (4"-6") obtainable at any hardware store
Pliers
Assorted jeweller's files
N.M.R.A. HO gauge
Fine pointed needle
Araldite
Soldering iron
Optional
Power drill with horizontal stand.

Now begins the process of cleaning the spokes. This is where the jeweller's files are essential. File all excess Araldite from between the spokes and also on the inside surface of the wheel. Take your time with this and do a good job. When you finally paint the spokes you should not be able to see where the cuts have been. As mentioned before it is advisable that the axle be left on the wheel that has been insulated. This avoids any hammering on the insulated wheel when the loco is reassembled. Paint wheels black (or red), I used 'Humbrol' matt black.

We will now proceed to reassemble the loco. I altered the wheel arrangements here a little, except on the 4-6-2 loco I converted. Instead of putting tyred wheels on the back, I made them the front pair of drivers. The reason I did this was that I found that there was more weight over the rear drivers and it would be preferable to use these for current collection. Do not attempt to use plastic tyred wheels for current pickup.

The job of quartering the drivers takes time and is a matter of trial and error. Before the wheels and axle are

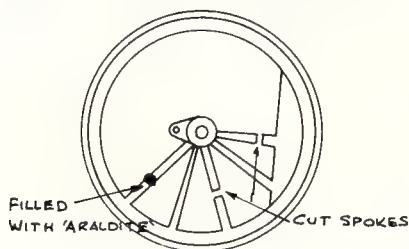
fixed in the loco, put a fibre washer on the insulated side and a brass one on the other side. I left off the washers on the middle drivers to allow some side to side play, so that the loco can negotiate tight curves. I feel these washers are necessary if you are going to use the N.M.R.A. wheel gauge (Marklin wheel sets are narrow back to back). Fix the front and rear drivers first, when you have them accurately positioned, insert the centre drivers. When replacing the geared wheel on the axle, position it so it is perfectly flat, insert the axle, then with the use of the punch, tap the axle from the other end. This avoids any tapping on the insulated wheel.

All the wheels must be lined up fairly accurately to prevent binding when the side rods are replaced. Reassemble leading and trailing truck wheels if necessary. If the loco is the tender type and you intend to use the tender for current pickup, remember the insulated wheels will be on the opposite side to those on the loco. You will also have to insulate the tender from the loco chassis. I will leave this to your own ingenuity. Next we need to devise a current collector. I removed the Marklin centre rail pickup shoe but left the spring brass piece of metal on the insulated piece of fibre under the chassis. To this brass I soldered a Tri-ang phosphor bronze pickup wire. Once the pickup is fairly accurately positioned and soldered, the insulated pad can be removed from the chassis and the wires bent outwards with pliers to ensure good contact against the wheels. Make sure the wire is so positioned that it only rubs against the outside insulated piece of the wheel.

We now have a loco suitable for running on two rails. However, it is wired for A.C. and we want to use D.C. current.

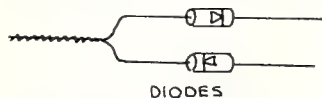
To many like myself this seemed an impossible task. I thought of permanent magnets, the impossible task of fitting same, getting the motor out of alignment, etc., etc., and ending thoroughly frustrated and dumping the lot in the rubbish tin. However, as things eventuated, this is the simplest task to do in this conversion. All one needs is two diodes, no need to touch the motor mountings, the brushes, etc. Just a simple matter of removing the Marklin reversing gear and reconnecting the wires as desired later on. The diodes I used were A.W.A. IN3194.

This type was used purely because they were given to me to try out. I find they work perfectly in all my locos. Some electronics expert may have suggestions about using other better types of diodes. The A.W.A. type that I used is also very compact and takes up very little room in the loco. I have been able to convert the smallest 0-6-0 tank that Marklin make without difficulty. When buying your diodes insist on the A.W.A. type. Once I was almost sold a substitute diode which I am sure would do the job electronically



speaking, but it was about three times as big as the type I was using.

I will now explain the method of wiring. Firstly, disconnect all wires from the reversing switch and remove the latter from the loco body. Take the two diodes and lay them side by side so that each is reversed in respect to the other, i.e. as shown in diagram.



Twist the wires at one end around each other and solder. Remember to hold the wires with pliers between where you are soldering and the actual diodes. This prevents excessive heat reaching the diodes which could be damaged. Twist the soldered wires around the screw out of the old reversing switch, tighten the screw and then solder wires to chassis. This method provides a good mechanical and electrical union of diodes to loco body. Wrap some insulating tape around diodes to prevent them touching.

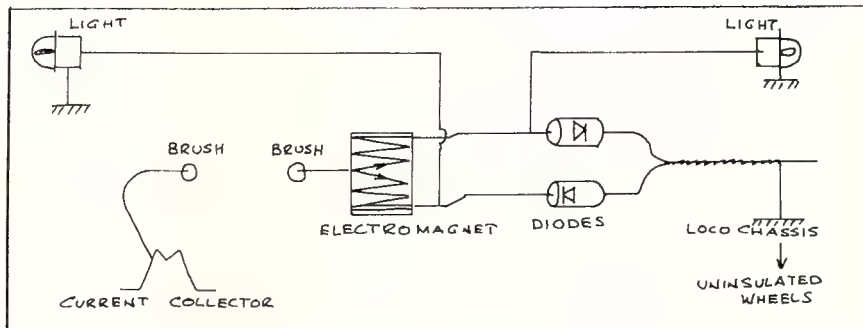
Solder a wire from the pickup to one of the motor brushes. You will notice that one of the brushes has a lead going into the electromagnet, do not disturb this wire, solder your pickup lead into the other brush. From the electromagnet you will observe that there are two free wires. These wires are to be soldered to the free ends of the diodes. Which wire goes on which diode? This is decided by giving the loco a test run and comparing it with another loco which you know to be wired correctly. If the way you connect the wires causes the loco to run in the opposite direction to that of the known comparison loco, then merely disconnect both wires and fix them to the opposite diode. Remember to hold each diode wire with pliers when soldering.

At this stage you are probably wondering what to do with an extra wire with no apparent connection to the motor. This wire is the lead coming from the lights on the loco. You have two alternatives in the connection of this wire (or wires). You can solder it to the pickup lead, wherever convenient, in which case the loco light will stop

HINT

One of the most difficult jobs to do when assembling a kit is to place a small enough amount of glue in the right place. Screw a cut-down hypodermic needle (preferably 22 gauge) over the nozzle of the tube of plastic cement and use the device to place small amounts of glue in normally inaccessible spots. Keep a fine wire in the needle bore to keep it clear for future use. As the body of the needle is made of brass then tap a thread inside it and this will cut its way into the leaden nozzle and always remain secure.

—R. G. BEATH.



on whenever the loco is moving, i.e., forward or reverse. The other alternative is to fix it to one of the diodes so that the light goes on when the loco moves forward but does not go on in reverse. As before, test which diode gives you the right connection. Remember that this lead is attached somewhere between the diodes and the electromagnet and not at the other common end. If the loco has lights at both ends then merely connect each wire to the appropriate diode. This will give you lights in the running direction. You will find the lights are not as bright using this method but this is probably an advantage.

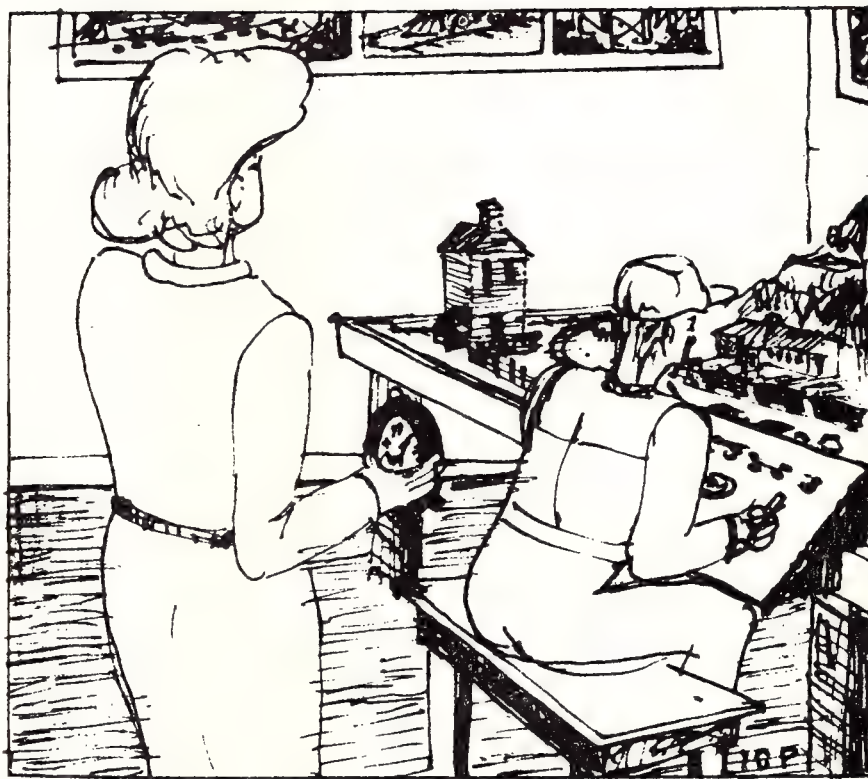
Incidentally, I think all the Marklin locos have suppressors to prevent interference with some radio and TV appliances. I did not interfere with

these and I left them in their circuit position.

Check all soldered connections and wiring. Oil the motor bearings, axles, etc. Replace valve gear, side rods and body. I am sure you will be pleased with the performance of your loco.

Many people may ask: why go to so much trouble in converting these locos. I believe Marklin locomotives to be very good quality for their price and to be worth the effort of conversion. Currently, Marklin market two-rail locos under the name 'Hamo', I have had no experience with these locos, but I am sure it is a step in the right direction.

I would be pleased to answer any queries about this article if they are directed to the magazine columns. I would also appreciate any criticism or ideas that readers may offer.



"You and your scale clock! I've just spoilt a perfectly good cake."

HOW I BUILT 4417

PART 2

A BEGINNER'S SCRATCH BUILT LOCO.

by RODNEY TONKIN

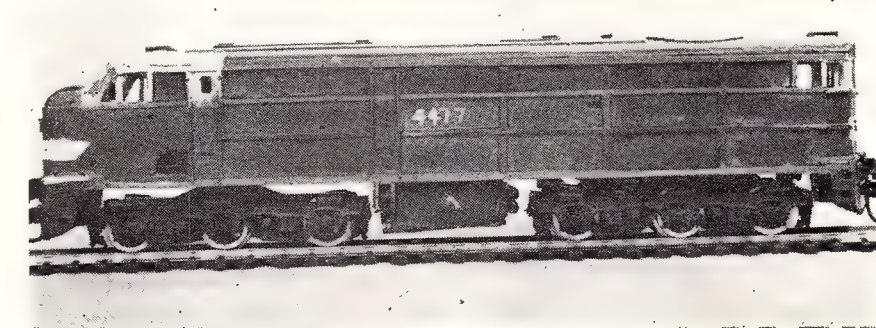
Next comes the rear cab wall. It is made of 1/32" cardboard and of size and shape as shown in the diagram. The roof parts, viz. large roof plate, small roof plate, dynamic brake grid cover, exhaust cover, radiator filling cap, dynamic brake inlet and outlet, exhaust outlet and radiator fan cover are cut out of 1/32" cardboard. From the same 1/32" cardboard make front cowcatcher and rear cowcatcher. Make six 9" lengths and one 15" length of 1/32" cardboard each 1/16" wide. These pieces are to simulate the rivet strip on the prototype that holds the plywood sides and wire mesh screen to the steel truss body frame. This material may be embossed to simulate rivets but unless you are good at it, don't, because it will detract from the appearance of the model rather than enhance it.

The number boards and buffer assemblies can now be built. Locomotives in the 4401-4460 series have only two number boards, both at the front. Locomotives of the 4461-44100 series have four, the extra two being on the rear cab wall above the windows. These are best made, painted and lettered now, as it is much easier to handle the lettering. Cut out the buffer plates to the size in the diagram and scribe along the dotted line and bend along this line through 90°. Use a piece of 1/16" balsa to reinforce the cardboard buffer plate angle but it should be concealed. Cut two buffer mounting plates to size shown. Place all these parts safely aside.

Body Assembly

Coat the inside of the body sheathing with cement and also the body sides. Now carefully position the sheathing on the body and gently clamp it in position taking care not to dent or to mark the relatively soft surface of the cardboard. When this has dried apply cement to the cab rear wall and the frame rear edges, 1/8" square up-rights, and rear surface of the roof and position the cab rear wall in place. Take a piece of clear acetate sheet and by trial and error cut it so that it fits in where the front windscreen should go. When it is the right size and shape, cement it in place.

Mix up a small quantity of spackling compound and use it to fill any crevices along the joints between the body sheathing, rear cab wall, roof and the nose block. Next build up the headlamp shape on the nose. Use more compound than is necessary and smooth it to the final shape with emery paper. The spackling compound should be dry (approximately one hour) before handling. It is best left overnight so



make it the last job for the day so you won't be held up waiting for it to dry.

With the spackling compound dry, the roof parts may be added. First the large motor generator hatch cover, then the smaller cover that allows access to the radiator, the radiator fan cover. On top of these are cemented the dynamic brake cover, the dynamic brake inlet and outlet, exhaust cover and exhaust outlet. The radiator filler cap is cemented to the centre of the radiator hatch.

Now is the time to decide on the coupler mounting. To obtain the correct wheel spacing the bogies must be turned around so that the shortest axle spacing is at the outer ends of the loco. This means that the original Lima Talgo mounting is unavailable, so our couplers must be body mounted. This won't worry modellers using Kadees. I use these successfully on 15" radius curves using MKD 8's. However, if X2F's are used the loco may be restricted to 18" curves. If mounting Tri-ang, Rivarossi, Lima, Fleischmann, Marklin, or Peco couplers, it may be an idea to try a Talgo type mount by making new bogie base plates out of sheet brass or plastic having an extension on one end to carry the coupler. If the couplers are to be body mounted it is best done by building up a mounting pad on the frame. To get the right height, sit the body on the bogies. They may need some of the plastic trimmed off so that they will fit up against the frame without bending the body sheathing.

Place it on some straight track. Hold the coupler in the draft gear box and measure how much packing is needed to get the correct coupler height by using the NMRA Standards Gauge. There is a special hole for this in the gauge. Cement this packing in place on the frame. Make sure that the coupler holes in the cowcatchers are correctly positioned so that the coupler will have sufficient swing. However, do not cement on the cowcatchers as yet.

The finished model.

Because the coupler mounting blocks have been cemented onto the frame some of the original plastic frames must be removed to clear them. Drill and slightly countersink four holes in each bogie mounting. When this is done put the loco on its back and take the bogie mountings and position them so that the front of the lead bogie is 0.4" from the front of the frame and the rear bogie is 0.45" from the rear of the body.

Check that the power bogie has enough swing and then mark the position of the holding screws. Drill the pilot holes for the screws and screw the bogies into place, making sure that the motor pick-up wire is connected to the lead bogie. Now test the loco on the layout. At first it will probably run stiffly but after a couple of hours it will smooth itself out. When it is tracking through your tightest curves and most complex pointwork to your satisfaction it can be returned to the workbench to complete its construction.

Cement on the cowcatchers, drill the coupler mounting holes and mount the couplers. Take the loco back to the layout to test the couplers for coupling and uncoupling action. If using Kadees test the delayed uncoupling action. Now test it on curves firstly with the shortest car and then a long passenger car.

Weighting the Loco

Now we come to constructing the fuel tank and providing some weight so that we have a chance of pulling a decent sized train. Cut the original ballast weight that came with the locomotive so that it is 1.2" long, 1" wide and 0.4" thick. Take the 1/4" dowel and cut two pieces as long as the width of the block. Cement these to the block. These are the loco's main air reservoirs. File down the remains of the ballast block until it fits into the loco body above the fuel

With the help of this ballasting and the rubber tyres on the driving

The best way to mount the ladders is as follows. For the steps on the lead bogie cut a length of ladder strip 4 rungs long and cut out the first and fourth rungs. Bend the uprights above and below the remaining

In modelling a 44 Class it is best to obtain photographs of it. Take front, back and both sides of **one** engine as there are minor differences due to the locos being repainted after overhauls and different painters have dif-



Final Details

The buffer assembly is now put in position as follows. The buffer mounting plates are cemented to the cowcatchers as shown in the end views. Allow to dry. The reinforcing piece is cemented to the buffer plate. While the buffer plate is drying cement a piece of $\frac{1}{8}$ " square $1/16$ " thick balsa to the reinforcing piece behind the lobes at each end of the buffer plate.

rungs through 90°. Position these on the lead bogie side frame so that they are below the cab door and at the height above the rails shown in the plan. Drill four 1/32" mounting holes and cement the steps onto the bogie frame. The other steps are made by cutting a six rung piece of ladder, bending it at the third rung from one end through 90°. It is cemented to the top of the fuel tank so that it is below the door when the fuel tank is in place.

Painting and Lettering

ferent ideas on the exact colour scheme.

I use the following paints: Humbrol Railway Enamel signal Yellow, for the red lining Humbrol Railway Enamel bright red, Humbrol matt black for the bogies, fuel tank, buffer assemblies, wire mesh screens, exhausts, fan cover, air horns and cowcatchers on the locos 4401-4460. On locomotives numbered 4461-44100 the cowcatchers are a dull tuscan red not unlike red metal primer. Some 44's when stationed at Eveleigh loco shed were given aluminium coloured cowcatchers, but as this depot is now closed as a diesel running shed the practice seems to have stopped.

The lettering on the body sides is 12" high. On the ends it is 9" high. It is easy to do by hand using a five cent mapping pen obtainable at all newsagents or chain stores.

— Continued overleaf

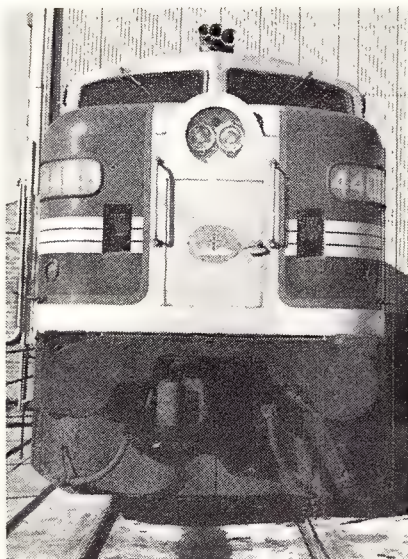
(Continued from previous page)

Finishing Touches and Weathering

When the paint is dry and the lettering and number boards are finished all details that really make the loco are added. Firstly, locos 4461-44100 have two single tone horns on each end. Secondly, locos 4401-4460 have two single tone horns at the rear, whilst at the front they have one single five tone horn, two twin tone horns and two single tone horns. Horns are made by taking the $\frac{1}{4}$ " panel pins, bending them at the appropriate place and pushing them into a $\frac{1}{32}$ " hole drilled into the roof. Five tone and twin tone respectively, are made with five or two pins bent to the right shape and pushed into five or two holes in the roof and set at the correct height in the case of five tones.

Hand grabs, door handles, uncoupler bars, brake hoses, and windscreen wipers are made to lengths shown in the plan and in the photos from $\frac{1}{32}$ " diameter brass wire and positioned in $\frac{1}{32}$ " holes drilled in the body. Make the staff-exchanger with its rams horns as shown but $\frac{1}{4}$ " longer so that it can be pushed into the body frame.

When all these parts are added they can be painted but the handgrabs on the doors are best left unpainted as the paint wears off after a couple of weeks' service. Although initially silver the air horns turn grey and finally black after six months. The same can be said of the whole roof and nose, the sides and ends, as after a few weeks they are covered by a thin film of diesel soot and red or grey dust. The bogies, fuel tank and cow-catchers are usually covered with dust which reflects the countryside where



Front view of prototype.

the locomotive is usually operated. The black grime from the roof becomes streaked down the sides with the rest of the dirt when it has been recently raining.

To weather a model like this is easy. I use a set of Reeves water colours and a No. 1 and No. 8 brush. Add a few drops of household detergent to the water you use when mixing your colours and the paint will flow where you want it. Water paints have the advantage that they can be easily removed if you want a fresh-from-the-shops loco. One final job remains. Glue the headlamp and rear headlamp jewels in position. Now your locomotive is legally able to haul a train.

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CASTLEDARE MINIATURE RAILWAY

A WEST AUSTRALIAN VENTURE

During August, 1964, an approach was made to the Castledare Boys' Home, Cannington, for ground to build a miniature railway. A temporary track was built for the October field day, 1964. At this stage, one steam and one diesel locomotive were available with three small wagons and 80 feet of straight track.

The first field day was a success, earning \$35, but it was five months later before permission was granted to lay a more extensive track of up to 1000 feet.

As soon as the green light was showing, the project got under way, by surveying the area on which we were to build our right of way. The children helped by carrying excavated sand away in their shirts, and thoroughly enjoyed themselves by being able to assist in the construction of their railway.

Donations

Track materials were obtained from a very generous company who donated what we could not afford to buy. This was welded into lengths of up to 150

feet and carried into place by 100 children, positioned out along its length and looking like a gigantic caterpillar.

Another company provided several 5 feet diameter concrete pipes. These were rolled into previously dug trenches, lined up and jacked into position to provide us with a tunnel almost 30 feet in length. The mountain was built over the tunnel later.

Water Problem

As drainage became a problem in the tunnel (we had over one foot of water in our workings), a drain, 150 ft. long was installed down to the river, which was continued to keep the tunnel dry.

Three bridges, two of 30 ft. span and one of 10 ft. were constructed to carry the line across a river inlet and swamp, and these were made of rails or timber or whatever we could lay our hands on.

A 3 ft. embankment of 300 ft. in length was constructed mainly by the children, in order to keep the rail at least two feet above water in the winter season.

First Train

Finally, the 1,300 feet of track was completed and the first train ran just one month prior to the October Field Day, 1965. All was well. Three double bogie wagons were hurriedly made and pressed into service, earning on our second Field Day exactly \$100.

During the following year three more wagons were made, the track became comprehensive with a turntable, and extra sidings, with quite an elaborate point works, and some of the earlier light track was replaced with heavier rail. Also a complete station building was donated, along with a 1,000 gallon rain water tank, for the Steam Loco's water supply.

Steam Loco.

In 1966 a new steam loco and diesel loco were completed, also two small petrol driven locos (Petrol Bugs) were built to allow the Brothers to run their own trains. A railway refreshment room was also established during this period, which has also contributed towards the funds.

The 1966 Field Day showed an overall profit of \$200, which with previous amounts was given to the home. The railway carried over 2,000 passengers, using two steam and one diesel loco, with six passenger wagons, on the afternoon of this day.

At present, a scheme is under way to increase the length of the track up to 3,000 ft. including the construction of a 95 ft. three span girder bridge, to carry the line over an artificial lake, and later down to the Old Oak Tree, from which the Home derived its name — Castledare — or Home of the Oak.

Depot

A permanent brick loco depot is being built and a move is afoot to acquire a railway coach as a club room. So if you wish to join the fun at Castledare and help in this worthy cause, please do not hesitate to contact us either at home on Saturday afternoons or on the first Sunday in each month, our normal running day. We have plenty to interest everyone in all phases of Railway, Civil Engineering, Signalling, Track and Rollingstock construction, and should you desire to build a locomotive, either steam or diesel, we would be only too happy to give a helping hand and the know how.

In all events, come along and have a ride — adults and children all enjoy this fascinating railway travel — always the first Sunday in the month, except January, and there are often more running days.

The railway is also available to social outings, clubs, etc. We supply free rides for an overall fee.

Castledare is located off Riverton Road, Cannington, W.A.

TRANS-AUSTRALIAN RAILWAY MEDALS

Railway enthusiasts are well known for their habit of collecting railway souvenirs, and we are pleased to announce that to celebrate the 50th anniversary of the opening of the Trans-Australian Railway in October, 1917, a number of medals in silver and bronze have been specially struck. These medals, measuring one and a half inches in diameter and serially numbered, are supplied in a de-luxe plush case with a suitable inscription in the lid. The diesinking is the work of a railway modeller, Mr. Keith Gray, employed by Stokes and Company, engravers. The medal has been approved

by the Commonwealth Railways Commissioner.

We feel the medals will appeal, not only to railway enthusiasts, but to coin and medal collectors, historians and other hobbyists. The sterling silver medal is priced at \$10 and the bronze at \$4 including the case and postage. These medals may be obtained from Pacific Promotions Pty Ltd., G.P.O. Box 594, Adelaide, South Australia, 5001, or from your local coin dealer or the Railroad Book Company of Australia. Please add 20 cents to cheques to cover bank clearing charges.

Other News from "MODEL DOCKYARD"

— Continued from page 4

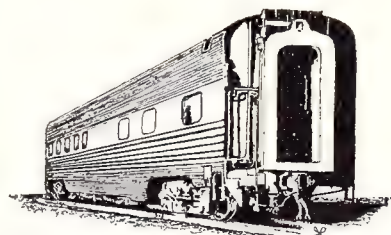
Interest in O gauge continues to grow with the increasing range of quality locomotives and rolling stock. To cater for those who missed out on previous runs, Katsumi have now supplied more 8000 Gal. Double Dome Tank Car (less trucks) at the same price of \$14.75, U.P. "Big Boy" at \$430.00 and N.Y.C. 'J3a' Conventional Hudson at \$250.00. New items now arriving comprise: Offset-side Welded, Ribbed Hopper, of A.C.F. type (less trucks) at \$20.95 and Ore Cars, with ribbed sides (less trucks) at \$15.55. P.R.R. 'H-25' Quad Hoppers (less trucks) are expected soon with the first run of a fine B.&O. 0-4-0 'Dockside' Tank Loco. at \$72.50 and about the same time we are hopeful of offering a USRA 0-6-0 Switcher!...

In stock are the new Hornby/Wrenn 2-8-0 '8F' Loco. at \$24.45 and the 4-6-0 "Cardiff Castle" at \$24.35. By the time this issue is on the stands we will also be offering the B.R. 2-6-4 Tank Loco.

A GUIDE FOR BEGINNERS

At the recent model railway exhibition in Sydney we were pleasantly surprised when visiting the stand of the Australian Model Railway Association to be given three pamphlets produced by that society. One is termed A Guide For Beginners; second is called Basic Layout Design and Wiring Guide and the third is called Adding Scenic Detail.

These are excellent little publications which we feel every modeller, beginner or experienced, should possess. There is not room here to describe them in full but some of the headings included may indicate their contents. Space and Cost — Gauge — Accessories — Preferred Layout Plan — Layout Baseboard — Trackwork — Couplings — Locos and Rolling Stock — Controllers — Paper Mache — Plaster — Trees. Copies of these booklets may be obtained at 15 cents each from The Honorary Secretary, A.M.R.A. (N.S.W. Branch), 9 Wyuna Road, West Pymble, N.S.W. 2073.



CLUB CAR

THE AUSTRALIAN RAILWAY HISTORICAL SOCIETY

The Australian Railway Historical Society was founded in Sydney in 1933. There are now divisions in all mainland capitals and sub-divisions in Geelong, Launceston, Newcastle and Canberra. Total membership is over 1500 and is growing steadily.

The main objects of the Society are to provide means whereby people interested in the history and operation of railways in Australia may associate with others with similar interests to their mutual benefit and enjoyment, to encourage the study of Australian railways, past and present, to encourage the compilation of authentic records, to produce publications, to arrange outings and to preserve relics.

Each division holds a monthly meeting which usually features a prepared talk, films or slides dealing with some aspect of railway interest. Time is also set aside to enable members to meet together for exchange of information, photographs, etc.

The Society's "Bulletin", an illustrated magazine of high quality, containing articles of historical and current interest from all states, is published monthly. In addition, most divisions produce a monthly news magazine covering current events in their state.

Membership is open to anyone interested in railways provided they are 15 years of age or more. The current subscription rate is \$5.00 per annum and includes the "Bulletin". Visitors are welcome at all meetings.

Please address all enquiries to the Secretary at Box E129, Post Office, St. James, N.S.W. 2000.

THE SYDNEY SOCIETY OF MODEL ENGINEERS LIMITED, 190 Parramatta Rd., Ashfield, N.S.W. Hon. Secretary, J. Harvey, 7 Beaumont St., Campsie. 2194.

This society holds exhibitions every Saturday at 2 p.m. Amongst the attractions are live steam locomotives, train rides, HO, OO and O gauge scale model electric trains, electric slot cars and I.C. racing cars and boats. Refreshments are available.

CANBERRA MODEL RAILWAY CLUB. Secretary: F. Holloway, 58 Janz Crescent, Griffith, A.C.T. 2603.

The September meeting was held at the home of Norm Cooper. There was a good roll-up, some 20 members and visitors being present.

At the conclusion of general business members were given details of the coming A.R.H.S. tour to Bombala and Tumut. Later Norm showed some films which he had obtained for the occasion from various sources. There were four films in all, two of them dealing with Australian rail-

ways, one with New Zealand railways (including some magnificent shots of steam traction as well as some breathtaking views of trains on high viaducts) and the other featured the German Federal Railways.

Our thanks go to Norm for a very entertaining programme.

This is the best time of year to see our National Capital in all its beauty so why not pay us a visit? When you do please ring either Fred Holloway (home 9-1807; business 4-0411 Ext. 206) or Ted O'Halloran (home 81-1774; business 61-3649) and we will arrange for you to talk trains while the family looks at the flowers.

WOLLONGONG MODEL RAILWAY CLUB.

Club Representative: Lyndon Spence, 71A Campbell St., Wollongong, N.S.W. 2500.

Members please note that the Club now meets on Thursday nights instead of Tuesdays.

Providing all goes well in the final exams one of our Juniors can hardly be called a Junior any more. Phil Harrigan will be moving into the working world and discovering exactly what is meant by the old saying "school days are your best days." Phil hopes to become a draughtsman in a local industry.

Our Honorary Secretary, John Coughlin, has accepted a position with the University of Boroka in New Guinea. John has always been an enthusiastic member of the Club and has been secretary of the Club since it was founded in 1962. John says that Egger-Bahn shall keep him happy during his three-year term.

Fred James has turned out from his home shops a very smooth N.S.W.G.R. "30" class tank locomotive. Fred's getting quite a "pro" on his "Unimat" now; has turned out three N.S.W. locos and is talking of building a "38" class next.

There have been many alterations and additions made to the Club Layout since our latest bulletin. "Kanangra" station has been redesigned and laid as a terminus instead of a through station. All main line is now completed and electrified using conventional block control. Lately the Scenic department has been doing more "contemplating" and "planning" than work but by this time next year the bulk of the scenery should be finished. Our original portable layout, although an integral part of the Club layout can still be loaded onto a trailer and used at exhibitions.

We hope to have a photo story of the Club Layout ready sometime next week, but until then happy model railroading and a Merry Xmas to readers of the A.M.R.M.

SYDNEY WESTERN MODEL RAILROAD CLUB.

President: W. K. McLeod, 66 Minter St., Canterbury, N.S.W. 2193.

At a meeting held at Franz Persson's home on September 17, 1967, members of the above club resolved to (a) delete from the club's constitution a requirement that members be financial members of N.M.R.A.; (b) increase membership to a limit of 20 members; (c) construct an HO scale layout; (d) raise membership fees to \$2 per month; (e) appoint a building committee. The club layout is to be housed in an extension of Franz's existing shed and construction of this new building will be the first task of members, and it is intended that the layout, when constructed, will be portable and available for exhibition and display purposes.

NOTICE

Would Konrad Peter of Cooma please advise the Editor of his address.



NOTES OF THE SYDNEY MODEL RAILWAY SOCIETY

GENERAL NEWS

At the recent Model Rails Show at the Lower Sydney Town Hall 'O' gauge again, in your reporter's way of thinking, was still the best show of trains having plenty of spare locos and trouble free running. On the layout were 9 loco hauled trains together with rail motors, 2 car diesels, 4 car diesels and the "Silver City Comet", with some 25-30 locos ranging from 12, 19, 30, 32, 36, 38, 40, 42, 44, 46, 60 classes and a 79 class shunter, together with a 3 truck Shay E.M.D. F7 type diesel and a Victorian 'R' class steam loco. These locos were all run being turned on a turntable and replaced on a change of trains. It was something that is not seen as a rule on working show layouts by the general public, so that this in itself was a crowd stopper.

Christmas night is getting close by now and with luck films of railway interest will be shown, after which supper by the members and soft drinks by the club. Further details as they come to hand will be placed on the notice board.

"O" GAUGE NEWS

Recently country member Ian Prescott from down the South Coast made a surprise visit after nearly three years away from Sydney. Ian, who was very keen, had some of his work, both in passenger and goods rolling stock, on the layout together with the coaling stage, "Delec" and track work. Good to see you again Ian.

Timetable running is smoother now that one week continues to the next week. Newer members have settled down well to running. John Alexander has at last finished the junction board and one can see at a glance where all trains are on junction control. Good work John.

How are things in Melbourne Barry? We miss you here for finding the little troubles in the wiring.

"H.O." NEWS

14-8-67. Rail strike, so we had a poor roll up of members. John Huxtable showed us the progress he had made with the pattern for making N.S.W.R. louver vans coded LLV. Dennis Sherring replaced the key on junction board which operated the passing loop points on new section with a four position key. This key will operate the points and at the same time gives control to Junction or Glenvale which means while Junction can bring a train down to track one or two of passing loop, Glenvale can bring one up to track one or two, whichever is selected.

21-8-67, what a night to behold all the HO's and O gauge members gathered around the HO layout to see the spectacular and realistic looking N.S.W.R. LLVs, 10 in all, placed on the tracks by the proud owner John Huxtable which were made by the rubber mould method.

The main feature which made these cars look so good was the silver grey paint and weathered look they all had. John said the weathered look was achieved by using the cleaning fluid he had cleaned his paint brushes in. He soon had them marshaled into a train at Central Goods with Arthur Wheatley's modified New One Model 4-8-2 which he made to look like a N.S.W.R. "57" class.

28-8-67. Where Dennis Sherring had taken the switch away from Junction Board which had operated points on new track passing loop he has inserted a plate in which are three globes behind $\frac{1}{2}$ " perspex which shows which track is set up on passing loop. This is done by having the globe alight on straight track leading into the switch, the other globes light up whichever track is selected on passing loop. Looks great Dennis.

John Huxtable's LLV's came in for a lot of discussion on how they could be modified to make up the pattern for a N.S.W.R. MLV. These cars have one set of very wide doors on each side recessed into the body. Ken Smith showed us his patterns for a MHG guards van. The sides and ends were cast and then assembled. Now he is making the patterns for the floor and roof. The lack of NSW's guards vans on the layout was brought to our notice when Frank Shen-

nen placed his AD60 Garratt on tracks at Wits End for a trial run to find out any faults in running. These trials were conducted on Wits End loop closely watched by our loco expert Ken Smith.

Frank set up the route from goods via down main into Wits End then up branch back to main. Coming up the branch 1 in 45 grade the loco had the power but was slipping badly. Frank eased back on the throttle and the drivers dug in and made the grade onto the up main where train was stopped at Home signal and uncoupled, then proceeded light through scissors crossover into Platform No. 3 where road was set up back down main to junction. Frank was asked to increase load by coupling Arthur Wheatley's NSWGR B.C.W.'s onto train and these were marshaled up and shunted onto train, making a load of 16 cars, or as the NSWGR would say 32 long, counting bogie wagons as two four wheelers. Frank this time set up route via new trucks return loop. On receiving a green at Junction he opened the throttle gradually and slowly took up the slack in the couplers to ease them through the turnout onto the bridge over Wits End track up to the plateau. Thence he was switched over onto the new track back of the mountains onto the down grade through No. 1 track of the passing loop into the tunnel under Central tracks.

4-9-67, again Frank Shennen brought his Garratt which was used with a string of bogie coal hoppers and an LHG van. This reminded us of the present day N.S.W.G.R. Glenlee run. From Central goods (John Huxtable in charge) the train was made up of LLV's and an LHG van. This ran to Glenvale via branch to Wits End. Dennis Sherring put his 42 class and 44 class diesel electrics at the head of the train to run around the loop at Wits End. The 42 was taken off and the train with 10 LLV's and van was offered to Glenvale. When the green

was given Dennis released the air and opened the throttle a couple of notches and the train slowly moved out of the passing loop onto the main line. This evening was obviously during the school holidays. Milton Ford, Frank Maxwell, Max Burke and Ken Smith all had their sons helping them.

18-9-67. Arthur Wheatley showed us NSW freight bogies he had made using the rubber mould method. A pair were switched to under John Huxtable's LLV. Frank Shennen was heard to say that Arthur's bogie exchange business was open. Michael Rowe was busy cleaning track. Floor and roof patterns for Ken Smith's MHG guards van were passed round for close study. They should look good behind a goods train.

25-9-67. John Huxtable showed his TT NSW 4 class diesel electric which was detailed down to the automatic staff exchange equipment. Operating was delayed whilst it was admired. The evening was spent operating to timetable.

17-10-67. The first all plastic MHG produced by Ken Smith was seen running behind our goods trains. It was a gem of a model and much admired by all; it gave the trains a much more familiar appearance. The finished model had been produced after a lot of patterns had been rejected and trials of fitting the pieces had been overcome.

23-10-67. Dennis Sherring was in early to continue the wiring of the signals to control movements through Junction. These will control trains from Central, Central Goods to Down Main, Wits End and Plateau branches in both directions and the Up Main from Wits End. A new 3-aspect signal was placed at the turnout at Plateau Branch for the new track to Glenvale. This will show a green when Plateau accepts a train from Junction and a yellow when the track is set for the new line.

John Glastonbury was at Plateau running his Tenshodo Baldwin 0-6-0T which he had detailed and weathered as befits a shunting loco. Frank Shennen was in the Valley. Dennis Sherring was at his Wits End showing John Huxtable how to operate the Junction control board. John had his son's christening present in for a run. This was a Tri-ang Caledonian single 4-2-2. Glenvale was under the capable hands of Max Burke. Tony Wyeth as chargehand at Central Loco was an O gauge hand who has started an HO railway with an Athearn EMD switcher with a flat wagon as a match truck. The latter has a Mantua coupler for operation in the HO roster. Arthur Wheatley who was at Car Sidings had his AD60 on a couple of trains during the night's running. John Wheeler was doing a good job as station master at Central. Lee Galloway did a good job also under difficulty with a recurring short circuit at Central Goods.

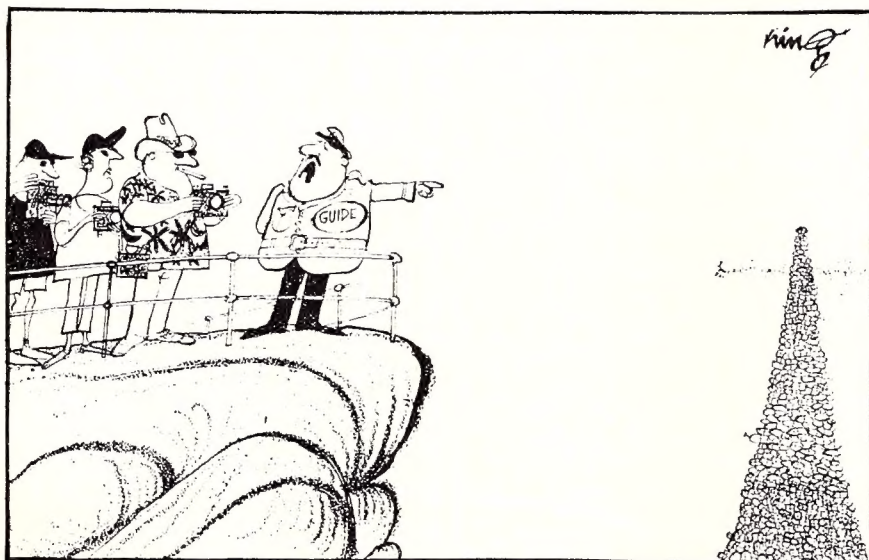
This is the last news sheet for 1967 so it is time to thank all the HO members for their co-operation during the year and for all the work members have done to improve the layout. Wishing you all a Happy Christmas and a New Year of Happy Railroading on the HO layout.

APOLOGY

To our readers who receive their magazines through the mail we must apologise for the late arrival of the September-October issue. Firstly, the magazine was delayed in printing due to the industrial trouble at the Sydney Mail Exchange holding up advertising material, and secondly the Distribution Office was upset as a result of sickness. We hope that you each received your copy eventually intact, and hope that it doesn't happen again. Perhaps the cartoon will explain the reason for the delay.

"On a clear day you can see Sydney. That's it buried under a heap of parcels."

(By courtesy of the Daily Telegraph, Sydney).



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To accompany David B. Leitch's article on the N.Z.R. Ab class locomotive, which appears on page six of this issue, Norm Coughlan has produced the plan which appears opposite. Our photograph shows Ab 823 with a short train awaiting departure from Westport on the west coast of the South Island.

(Photo by D. B. Leitch)

REPRINTING OF ISSUE NUMBER ONE

Requests for reprints of our first issue are still being received, but insufficient for printing to commence. Readers are earnestly requested to consider ordering this copy as even reprints will be considered as collectors' items in the near future as they should be indistinguishable from the original. In the meantime, all orders which have been received have been recorded until distribution begins.

COMING NEXT ISSUE

- See how to make and wire a control panel for your layout.
- Another prototype railway layout.
- More convention news.

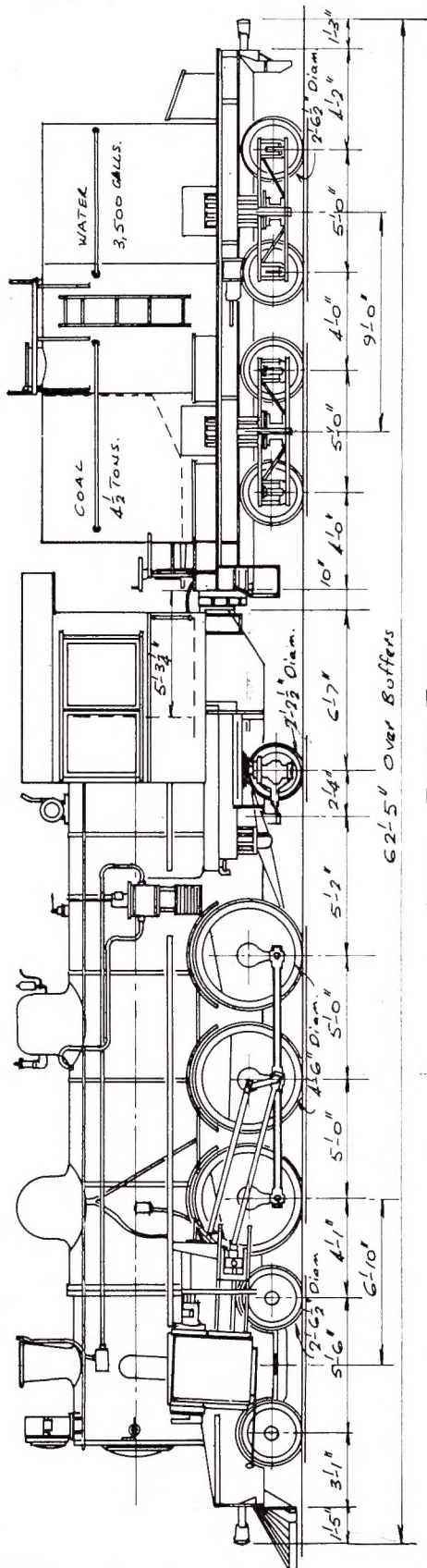
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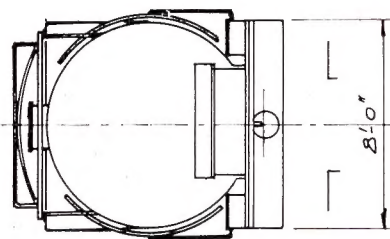
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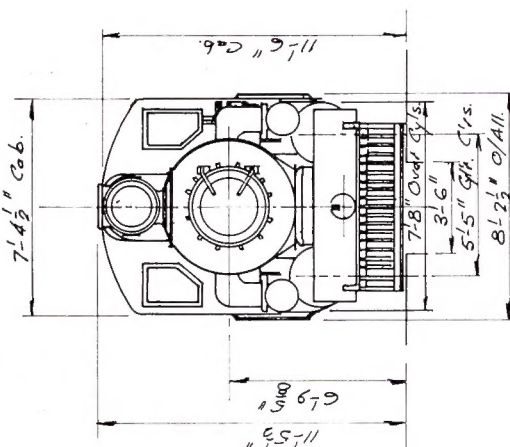
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